



On the Organization

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Reimagining Government: The Internet Will Make Governments Unrecognizable

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“There’s good reason to think that democracy is better suited than either hierarchies or markets to solving certain kinds of complex problems. To solve these problems, you need to bring people with many diverse points of view (each of which can capture different facets of the problem) into contact with one another so that they can argue about solutions and determine the better ones.”

Henry Farrell¹

Introduction

The Internet has connected humanity like never before, giving us unprecedented access to knowledge and, for the first time in the human epoch, a means to tap the creativity of our entire species. Farrel’s comment above notwithstanding, having become so connected we now experience a world of innumerable differences -- in terms of language, ethnicity, understanding, perspectives, values, beliefs and assumptions – and in so doing we have also created a profound basis for social friction. So much so that today’s fundamental challenge is to take advantage of those differences for the purposes of innovation and developing our capacity to work together, while at the same time, mitigating their divisive effects. The challenge represents a fundamental governance question, one which I believe must inevitably and radically transform our governing institutions. “The world

¹ FARRELL, Henry. “How Valve demonstrates democracy in the workplace”, *The Washington Post*, November 21, 2013 accessed at <http://www.washingtonpost.com/blogs/monkey-cage/wp/2013/11/21/how-valve-demonstrates-democracy-in-the-workplace/>

has reached a critical turning point”, say Tapscott and Williams², “reboot all the old models, approaches and structures or risk institutional paralysis or even collapse.”

There is little doubt that Internet-based connectivity has dramatically contributed to social complexity, together with the potential for social disorder – just think of the anti-SOPA protests of 2012³ or the Arab Spring uprisings. However, our governance models, which are basically hierarchical, have not kept pace. According to Ashby’s Law of Requisite Variety, every complex system requires a control system that is at least as complex. Yet despite an exponential growth in the social complexity, our governance systems have steadfastly remained anchored in the 19th century.

While government remains humanity’s principal mechanism for social coordination, efforts at government reform often languish somewhere between replacing legacy forms of mediaeval government and trying to renovate our 19th century Westminster or republican models that were created long before the Internet and social media were ever imagined. The current assumption seems to be that governments, styled along the lines of western representative democracies, have some intrinsic, absolute value rather than as a response to a specific context, at a particular point in time.

Hierarchical government may not be the only mechanism of social coordination, but in today’s world it has emerged as the most commonly used one. Other coordination mechanisms based on family ties, trade affiliations, networks or even markets exist but none have achieved in today’s world the same social prominence as hierarchical government. However, as social and environmental conditions continue to change, this form of government has proved almost impervious to adaptation and change. In fact, for many people, the notion of innovation in government has come to be regarded as an oxymoron.

That, though, may be about to change – for good or ill. “New models of governance have been proposed to recalibrate and even to reinvent the relationship between state and society. It is relatively uncontroversial to observe that the state is in flux around the world.”⁴

The following are ten fundamental assumptions about government (as currently experienced) and its role in society that are being challenged by the Internet and technology. In each case, the Internet has either created a means to compete with government directly or it has created a more complex context wherein the government claim as an effective social coordinator can be seriously questioned.

1. Government is the ultimate authority for divining social needs and setting social rules

² TAPSCOTT, Don & Anthony Williams. *Macrowikinomics*, Penguin, Toronto, 2010: 10

³ In response to the authoritarian provisions of the US Stop Online Piracy Act, or SOPA, many online providers and information sources went offline, most notably Wikipedia, on 18 January 2012 in the largest protest in human history.

⁴ *The Future of the State*, Globalization TrendLab 2014, University of Pennsylvania, 9 June 2014

2. Government knows best because it controls the largest storehouse of knowledge and expertise
3. Government has all the resources needed to solve social problems
4. Government has all the coercive power needed to affect solutions
5. Government has ethical and moral purposes that transcend those of its citizens⁵ giving it special insight into the 'public interest'
6. Collective tradeoffs are affected by Government by bringing representatives of various interests to one place whereupon they engage in elite accommodation
7. Government is the only actor that can be trusted to deliver public goods and services - - services like education, healthcare, public infrastructure, steering the economy and the provision of social supports
8. Only Government can keep you safe
9. Government is obligated to reinforce traditions of leadership and followership.
10. Government changes slowly which is to the betterment of all.

If these ten assumptions are no longer valid, as I believe they are, then we will have to re-imagine the roles which we allocate to government in the future. Undoubtedly the overall task of social coordination will remain, but it is hard to believe that government as an institution will function in the same way as it does today.

For instance, the original conditions which made our parliamentary or republican models of government so eminently practical and sensible circa 1775-1975 are gone. Elected representatives were originally required because citizens could not travel to one place to discuss issues together. Most citizens eschewed discussions on most topics because they had no means to become sufficiently informed on them. Instead, politicians took the time on their behalf to become informed experts to better represent the interests of their constituents. The scope of issues often remained local or national instead of global. Communication was slow -- by horse, train, telegraph or mail -- leading to slow decision making. And most citizens exhibited an allegiance with clearly identifiable social groupings, making elite accommodation an efficient means of social coordination.

Today however, the Internet has created conditions that may be characterized by an irrelevance of distance; ubiquitous knowledge; allegiance to multiple social groupings and multiple interests that change over time; instantaneous communication via mobile phone, Internet, YouTube and social media; an almost immediate awareness of worldwide events; cross-sector and cross-national partnerships; global economic and social interdependence; social self-organization at any scale; and innumerable and often competing perspectives on what it all means.

For instance, in the recent case of the school girls abducted in Nigeria, children outside of Nigeria have helped rally in their support, children they have never seen nor spoken to, but whose plight they've learned about through Twitter and Facebook. Yet these abducted girls live in a place their parents might not even be able to find on a map. And just to underscore, it was not officialdom that initially rallied support for those abducted

⁵ HUBBARD, Ruth & Gilles Paquet, *Gomery's Blindness and Canadian Federalism*, University of Ottawa Press, Ottawa, 2007: 100

girls (their own government continues to downplay the importance of their abductions), it was our children themselves. In such an interactive environment, where agency is less and principal acting becoming more and more common, the world is being propelled towards a model of mass social coordination that challenges the previous two centuries of government practice. Says Robert Steele, co-founder of the US Marine Corps Intelligence Activity, “public agency is emergent, and the ability of the public to literally put any bank or corporation [or government] out of business overnight is looming.”⁶

That said, if the Internet is making the old governance models obsolete, what is emerging to take their place? It would seem to some that as government evolves, in many ways that new model must begin to resemble the Internet itself -- connected, networked, open, inclusive, permissionless, facilitative, collaborative, trusted, learning, innovative and adaptive – becoming in effect a platform for human cooperation⁷. It is not leader-centric model but an individual centric one. That’s the optimistic view.

Concurrently, we are also witnessing within modern democracies attempts to:

- ◆ diminish or gloss over the inconvenient diversity that so troubles hierarchies. If diversity exists, then pretend it doesn’t or vilify it as a way of rallying that narrow group who might identify most with you;
- ◆ reduce the impacts of uber-connectivity by attempting to control the flow of information by creating artificial barriers, including the cultivation of asymmetric privacy – privacy for you and transparency for others – in the name of ‘national security’;
- ◆ reassert forcefully and repeatedly the myth that someone must be in charge; or
- ◆ revert to pre-modern forms of governance, i.e. leader centric, because of fears that things are now “out of control”.

Taken to extremes, such attempts may engender a re-emergence of the old, strongman-style governments that were based on fear and fealty to a leader that were commonplace over 200 years ago. I suspect that whether transforming or retrenching, the change of current governance practice is unlikely to happen quietly.

This paper will examine the challenges to public management and leadership and attempt to identify the organizational frameworks, skills, and mechanisms that will be needed to support an emerging model of government driven by collaboration, participation and stewardship. In particular, it will explore the fundamental social problem of distributed governance identified long ago by Hayek⁸ and which the Internet now puts into sharp relief – that is the problem of the utilization of knowledge, resources or power which are not given to any one person in their totality.

⁶ AHMED, Nafeez. “The open source revolution is coming and it will conquer the 1% - ex CIA spy”, *The Guardian*, 19 June 2014 accessed at: <http://www.theguardian.com/environment/earth-insight/2014/jun/19/open-source-revolution-conquer-one-percent-cia-spy>

⁷ PAHLKA, Jennifer. *Coding for a Better America*, TED Talks, March 2012. Accessed at: http://www.ted.com/talks/jennifer_pahlka_coding_a_better_government.html and Don Tapscott quoted in TOSSELL, Ivor. “Let’s crowdsource Canada”, *The Globe and Mail*, 20 Feb. 2013

⁸ HAYEK, Friedrich, A. "The Use of Knowledge in Society", *American Economic Review*. Vol. 35, No. 4. Sep., 1945: 519-30

We begin, however, with a bit of a retrospective to see why and how we arrived where we are today with government.

Social Evolution

The story of human society can be characterized as the story of ever more complex systems of collaboration, what Wright has described⁹ as the only consistent logic of human civilization. Not that competition hasn't been a factor. It's just that in response to those Darwinian pressures, human beings have consistently sought out ever more complex ways of cooperating with one another through various combinations of trade, protective alliances, migration patterns, and knowledge sharing. The incessant competitive challenges were frequently met by actors working together instead of working apart. Still, despite these competitive pressures, Wright has emphasized that "much of the growth of non-zero-sumness over the past few millennia [has been] 'pulled' together by common gain, not 'pushed' together by a common enemy."¹⁰

This collaborative trend has had two parallel and direct consequences: **firstly**, that different people and communities working together have tended to generate an increasing diversity in human thought -- the ideas from one community enriching another; and **secondly**, that as social diversity increased, so did the propensity for social conflict, necessitating more complex systems of social cooperation in order to mitigate those potential conflicts. Over the course of millennia, we have traded away our primal freedoms to '*do what we want, when we want*' in order to cohabit with others a world of laws, regulations, behavioural norms, and social etiquette that permit us to enjoy other more sophisticated freedoms such as the freedom from violence, the freedom from hunger (largely), the freedom from disease, the freedom from ignorance, the freedom of association, and the freedom to make a life of our own choosing.

These 'greater freedoms' have evolved over time in a natural way from the increasing diversity of thought that was brought about by juxtaposing people with different backgrounds, skills, histories, knowledge, cultures and perspectives. In today's language we might describe this coexistence in terms of an evolving global village. This trend towards co-mingling has culminated in our current Internet enabled capacity that essentially allows anyone to interact directly and immediately with anyone (at least online). Because there are inevitably many ways to do the same thing, or for partial views to augment each other, such co-existence has fuelled exponential social innovation. This innovativeness, coupled with a growing population, has encouraged ever more degrees of individual specialization and social complexity.

Take, for instance, the very banal example of food. Once food was simply a product of local products, local conditions and local history. It was the result of what you grew yourself. Today, however, any modern city has a huge proliferation of food types -- most of which are non-local including: English, French, Mexican, Chinese, Indian, Greek, Japanese, Californian, Italian, Mid-Eastern and a global host of others. All cooks can

⁹ WRIGHT Robert, *NonZero: The Logic of Human Destiny*, Vintage Books, New York, 2002

¹⁰ Ibid:326

prepare eggs, toast and coffee. Yet the existence of diverse populations in each city has permitted cooks to specialize in order to satisfy, not only the demands of their own ethnic group, but also the thirst for variety among all other groups as well. After all who wants to eat the same old stuff every day? So instead of efficiently creating lots of cooks who produce the same standardized food type, we have generated a host of specialty cooks who have spawned not only a broader range of culinary choice in their communities, but have also contributed to richer social ties between groups and broader trade ties among different locales in order to produce the wider range of food options.

I, for instance, have developed a taste for curries, shwarmas, and malbec wine, allowing me to share some small thing in common with people from India, the Middle East and Argentina and become much more appreciative of my country's connectivity, trade and immigration with these areas than either of my parents or grandparents. And, it is not just in the restaurant business where this is happening, but in every area of human concern. We are developing a shared sense of who we are that is becoming truly global – something that *Generation Z*, the digital natives¹¹, appreciate instinctively.

The more humans have been able to specialize, the more diverse we have become; and the more diverse we have become, the more specialization is encouraged further. Where once each family was responsible for their own food production, housing, child care, education, transportation, safety, health care, etc., today families provide few of these basic functions themselves. Instead, individuals now perform very, very narrow tasks and then, through a market system, they trade their products or services with others to acquire the goods and services that they don't produce themselves. In the process, we have, as members of a society, become much more defined by the tasks we choose to perform than by the more traditional attributes of language, origin, religion or residency. Our first order identification is with our work as chefs, students, teachers, doctors, lawyers, public servants, quantum physicists, etc. than with the circumstances of our birth as say our language, religion or nationality. The explosion in the last century of this task-based specialization is correlated both with unprecedented innovation and growth in individual and social welfare, but also resulted in unprecedented degrees of social variety.

In natural systems, increasing diversity in 'closed' systems increases its *entropy* or its state of disorder. Increasing specialization in a 'closed' community leads to a downward spiral of competition like that experienced by Easter Islanders as described by Jared Diamond in *Collapse*¹². To stave off these ill effects, communities must become more 'open', and embrace social interactions both within and without. In other words, to offset the disruptive, entropic effects of specialization, humanity has, as a general rule, evolved increasingly complex mechanisms of social cooperation that have had the effect of decreasing entropy by opening up individuals, communities and nations to one another and drawing on the ideas, experiences and resources of outsiders in a process of

¹¹ BENNETT, S.; Maton, K.; Kervin, L., "The 'digital natives' debate: A critical review of the evidence", *British Journal of Educational Technology* 39 (5), 2008:775–786

¹² DIAMOND, Jared. *Collapse: How societies choose to fail or succeed*, Penguin Group, Toronto, 2005:79

continuous renewal. Ilya Prigogine, one of the world's great authorities on entropy, once likened this process to "eating order from the environment"¹³.

Yet it is important to recall that increasing social cooperation has evolved not just from attempts to neutralize disorder (the stick); but also more importantly from attempts to enhance collective creativity and mutual welfare (the carrot). The social benefits of cooperation have been reflected not only in a reduction of conflicts, but also in the opportunity to grow social welfare through new knowledge and progressively more advanced innovation – at both individual and collective levels.

How is this cooperation affected? The primary mechanism for social cooperation is, loosely speaking, organizations. Organizations represent social structures by which individuals agree to work together and as a result reduce their costs of operation or increase their effectiveness. According to Coase¹⁴, principal among these factors is the need to reduce the transaction costs associated with exchanges when information is not symmetrical. This led Coase to suggest hierarchy as the optimal form of coordination in organizations – whether private, public or not for profit. It is a view that has predominated for almost a century.

Yet Turnbull reminds us¹⁵ that organizations can take on other forms as well, including markets, clans, associations and networks. Before there were markets, cooperation was organized around social relationships principally through family ties. Nowadays, networks are emerging as a significant organizational form. Each form has its own logic and appropriate context and no one form of organization is appropriate in all contexts. What is important, however, to recognize is that each of these forms of organization has permitted separate, value adding units to coordinate themselves through a sharing of information and resources in order to produce goods, services or outcomes that no one unit could produce as well or as efficiently on its own. As the specialization of human knowledge, skills and capacities continued, organizational complexity grew in parallel.

The advent of the Internet has, however, radically undercut the rationale for the recent historical bias towards hierarchical organization and as a consequence traditional government. It has pushed the transaction costs associated with connecting, exchanging information and coordinating activities towards zero, eliminating the need for the coordinating influence of hierarchy. While this might suggest to some the ascension of purely market forms of organization, the persistence of family, cultural, industry, trade or other associational ties makes this no more likely today than it ever was¹⁶. Steele makes

¹³ PRIGOGINE, Ilya & Isabelle Stengers, *Order Out of Chaos: Man's new dialogue with nature*, Bantam Books, Toronto, ON 1984:287

¹⁴ COASE, Ronald H. "The Nature of the Firm". *Economica* 4 (16), 1937: 386–405

¹⁵ TURNBULL, S. "Corporate Governance: Its scope, concerns and theories" in *Corporate Governance: An International Review*, 5 (4) 1997:180–205.

¹⁶ HOLLINGSWORTH, J.R. and Lindberg, L.N. "The Governance of the American Economy: the role of markets, clans, hierarchies, and associative behaviour", in *Private Interest Government: Beyond market and state*, eds, Streeck, W. and Schmitter, P.C., Sage, London, 1985:221-267

the case¹⁷ that today's market capitalism is "inherently predatory and destructive" and is "on the brink of being replaced by community knowledge, community sharing of information, and community definition of truth derived from transparency and authenticity".

The ongoing issue of social complexity, however, continues to push the need for collective problem solving front and centre, which according to Farrell and Shalizi¹⁸ markets and hierarchies are ill-suited for. Complex problems, they say, require a diversity of viewpoints yet markets, on the one hand, "homogenize" human perspectives while on the other, hierarchies limit diversity. Therefore as old organizational forms are found wanting, newer, more complex organizational forms must, in accordance with Ashby's Law, be created to accommodate the growing social complexity.

Over time, humanity has witnessed a sort of leap frogging in organizational forms. In an important recent work, Fredric Laloux has suggested that these organizational shifts have been mediated by progressive changes in human consciousness -- "every time humanity has shifted to a new stage, it has invented a new way to collaborate, a new organizational model."¹⁹ Each new shift in human consciousness, embodied in the prevailing assumptions, worldviews and paradigms, has called forth new organizational forms through which human cooperation could be manifested. "Every time that we, as a species, have changed the way we think about the world, we have come up with more powerful types of organizations."²⁰

Laloux's description of the evolution of human consciousness is derived from theories of developmental psychology that identify essentially seven stages of human development: basic reactive, undifferentiated self; low cognitive, ritualistic or magical; ego-centric and impulsive; social conformity; rationalistic; pluralistic and ultimately self-actualizing.

Stage 1 and 2 type organizations correspond to children up to 24 months of age where cognitive development is low. The organizational counterpart corresponds to primitive -- if any -- forms of organization such as that found in small tribes and villages and where role specialization remains very limited. Social tasks might include being an elder; a spirit world guide or shaman; with most men acting as hunter-gatherers, and women responsible for child rearing and cooking. As a consequence, formal organization is almost non-existent.

As history unfolds and cultures take root, social consciousness evolves to a point where people begin to see themselves as different from others, as well as from their environments. This might well correspond to the period of the "terrible twos" in child

¹⁷ AHMED, Nafeez. "The open source revolution is coming and it will conquer the 1% - ex CIA spy", *The Guardian*, 19 June 2014 accessed at: <http://www.theguardian.com/environment/earth-insight/2014/jun/19/open-source-revolution-conquer-one-percent-cia-spy>

¹⁸ FARRELL, H. and Shalizi, C. "An Outline of Cognitive Democracy", paper presented in *LaPietra Dialogue, Social Media and Political Participation*, New York University, 10-11 May 2013, accessed at: <http://www.lapietradialogues.org/area/pubblicazioni/doc000071.pdf>

¹⁹ LALOUX, Fredric. *Reinventing Organizations*, Nelson Parker, Brussels, 2014:5

²⁰ Ibid.:14

development, because while the ego may have become differentiated, the child's emotional and rational development are still lagging. Hence, the impulsiveness and the childish perception that everything exists simply to satisfy the child's needs.

From an organizational perspective, the equivalent of ego differentiation in organizations is **Stage 3** which manifests as a need to satisfy the whims and desires of the clan chief or tribal leader. As a result, we see the beginnings in this third stage an emergence of informal, *ego-centric* hierarchies which may be family or clan based. These also begin to incorporate social specialization – possibly freemen, artisans, shop keepers, small farmers, clerics, slaves, etc. – all of whom owe strict allegiance to the leader. Examples of these types of organizations might include the marauding Viking clans of the 8th or 9th century or a modern, organized crime family. Social coordination is facilitated through fealty to the leader and obedience to his desire.

According to Laloux, the next phase of development, **Stage 4**, sees human consciousness shift from egocentrism to ethnocentrism. Human identity becomes shaped by the group one belongs to -- whether that group be ethnic, linguistic, religious, caste, guild, or some form of task orientation. In this fourth phase, social organizations become truly hierarchical with an abundant diversity of social functions that are guided by command and control mechanisms that can be independent of personality. As a consequence, society diversifies further and embraces a pantheon of administrators, soldiers, craftsmen and tradesmen, scholars, builders, artists, physicians, businessmen, and even classes of scientists, entrepreneurs and explorers who may be willing to push the envelope of what is known and possible to seek out new knowledge and opportunity. In the past, this produced not only hereditary rulers, but also hereditary functionaries. Today we can still witness this form of group-based organization in churches, in all levels of government, in the military, and to a more limited extent within businesses and not-for-profit organizations.

In **Stage 4**, instead of fealty to the leader, organizations coordinate their members on the basis of strict *conformist* codes and behavioural rules that facilitate interactions within a group and cooperation between groups. Order, stability, certainty and predictability are valued above all else, and the contours of how inter-group coordination takes place are provided by those at the top. This gives rise to authoritative leaders who are often perceived by group members as being invested with special knowledge unavailable to the rest. In the past this was expressed as “the divine right of kings” but more currently can be seen in the “visionary CEO”. Not surprisingly, Newton's theories of linear cause and effect have resonated profoundly as the organizing metaphor. Someone, it is assumed, has more knowledge than all the others and that confers upon them the mantle of leadership²¹. They are ‘in charge’ while the less knowledgeable others owe them a duty of followership.

The next organizational phase, **Stage 5**, coincides with a stage of human development that is less constrained by ‘what is’ and more focused on ‘what can be imagined’.

²¹ In practice though it is usually just the opposite: it is the mantle of leadership that conveys an assumption of broad knowledge and expertise.

Rationality, strategy, meritocracy and achievement are the handmaidens of this type of organization. Consequently, task diversification in society increases exponentially as the creation of new roles becomes a key mechanism for reifying possible futures. The number of roles is not limited by what has existed in the past but only by what can be imagined.

Rules, tradition, debates over right and wrong, actual knowledge – all these become subservient to the production of the desired results. *Achievement* is the animating ethos. The more someone can understand enough of the world to generate desired results, the more valued they become, the more decision making authority they amass and the more perks they receive. Leaders in this phase are more engineers than visionaries and their organizations aspire to become the epitome of the “well oiled machine”.

Laloux also describes a sixth phase in which the ‘absolute truth’ of conformist organizations or the ‘practical opportunism’ of achievement organizations is replaced by ‘*pluralistic idealism*’, and a world view that “seeks fairness, equality, harmony, community, cooperation and consensus.” Inevitably **Stage 6** of organizational development produces organizations with strongly shared cultures and more decentralized, servant leadership-type approaches. In lieu of top-down hierarchies, these organizations opt for coordination styles that are more family-like, epitomized by the expression “we’re all in it together”. Decision making tends to be guided more by shared values than by expertise or positional authority. Many not-for-profits, academic, environmental and community-based organizations have adopted this mode of working together.

Lastly, Laloux identifies an emerging phase of organization, **Stage 7**, one which he calls *evolutionary*, where organizations are viewed as interconnected living systems; where their interdependent parts operate without hierarchy on the basis of peer relationships and shared commitments; and where coordination is achieved largely by means of shared purpose. **Stage 7** is dominated by interconnectedness and interdependence which, as former World Bank vice president Mieko Nishimizu put it, has given rise to a world of “inescapable mutuality”²². That mutuality is shifting collective consciousness and laying the foundation for *evolutionary* organizations, which have the following characteristics:

- ◆ a strong emphasis on learning over outcomes;
- ◆ a belief that the world is shaped by abundance not scarcity;
- ◆ where decision making is based on internal versus external yardsticks;
- ◆ where actions are about unfolding opportunities over problem-solving; and
- ◆ the overriding organizational goal is not personal gain or market share but the pursuit of wholeness through knowledge synthesis and an embrace of paradox and opposite values guided by some noble purpose.

Among the examples Laloux points to of such evolutionary organizations are: Valve, the American video game software developer; FAVI, the French metal fabricator; Buurtzorg, the Dutch home care service provider; and the American food processor, Morning Star.

²² Quoted in SENGE, Peter et al. *The Necessary Revolution*, Doubleday, New York, 2008: 43

In all of these shifts of organizational paradigms, technology has always played a crucial role, largely because of its impact on the evolution of social consciousness. The absence of tools, for instance, in early human history created an absolute dependence on the local environment, thus contributing to the human inability to differentiate between themselves and their surroundings. The advent of tools and tool making, however, helped contribute to man's ability to shape, to what ever extent, his relationship both with other human beings and to the environment and thus his sense of independence or interdependence from both.

Through the invention of writing man could begin codifying his abstract thoughts and sharing them with others, allowing him to test his thoughts against the thoughts of others and, in the process, he developed the roots of rationality, philosophy and science. Such thinking and writing was at first limited to the small cadres of ruling classes, but the invention of the printing press changed all that – providing a vehicle for popularizing ideas and the means of disseminating them across communities and eventually around the world. In doing so, the printing press laid the foundation for mass education and the dismantling of rigid, hierarchical societies and the conformist organizations that went along with them.

The steam engine and electricity set the stage for a global, industrial economy. The need in this economy for many workers with many different but standardized skills, created the motivation for mass education even as the printing press had already created the means for it. As the machine model of organization evolved, so did a huge variety of organizational roles and functions which involved increasingly specialized tasks based on narrow fields of technical knowledge. Many of these tasks were not just value producing but related to organizational coordination. The technologies created during this period enabled, for the first time in human history, mass travel and mass communication. The average person began to experience directly or vicariously through media -- radio, movies and later television – whole new worlds of human life, language, culture, history, religion, ideas, and wonder. However, as this technology-mediated, global human experience spread, so did exposure to traditional, inter-group conflicts associated with prejudice, racism, jealousy, greed and violence.

To coordinate among such a plethora of global differences, man began constructing global organizations – transnational corporations, global public agencies, and international NGOs – to help mitigate this potential for inter-group conflicts. First there were exchanges in knowledge facilitated principally through greater citizen mobility and media growth; and then the migration of belief systems and the expansion of political interests. This was followed by an international movement of capital via global financial organizations, multinationals and the internationalization of stock exchanges. These globalized business interests were later followed by global NGOs like Amnesty International, Doctors Without Borders, Greenpeace, and many others.

The globalization trend led to the formation of global trading blocks, like NAFTA and the EU, and mutual protection agreements, like NATO and the African Union. The last

century has witnessed many attempts to create global rules for the behaviour of nation states through such organizations as the League of Nations, the United Nations, the World Trade Organization, the World Health Organization, the World Bank and the International Criminal Court. While none of these organizations have been entirely successful, they all have all succeeded in partially reducing inter-group conflicts or provided new tools to resolve them. In the course of which, they have generated a global context for organizations and decision making that was rarely, if ever, present in the past.

With each new technology, society changed – sometimes for the worse but mostly for the better. Each successive technology permitted greater and richer opportunities for human experience, knowledge, diversification, specialization and collaboration. Concurrently, our human sense of possibility has continued to expand, leading to changes in values, world views, assumptions, and ultimately a more evolved consciousness. As a result, such shifts in human consciousness have become the impetus for new forms of coordination in both organizations generally and in government.

The Internet is a technology like no other. It changes how we do our work and what work we do. It changes our understanding of the world and our relationship with it. It changes our ability to connect with others as well as our capacity and scope for communicating with others. But it also has changed the threats we are exposed to creating a whole new category of cyber threats. And it has even changed our religious affiliations.²³

As a consequence, the very existence of the Internet and other social media technologies has begun to challenge the existing ‘power elites’ of government²⁴. Internet leaders, such as Balaji Srinivasan, the co-founder of Counsyl, Inc. a Silicon Valley DNA testing corporation, recently suggested that those dissatisfied with the status quo are in effect seceding from the ‘paper belt’ of US power centres (Boston, New York, Washington and LA) through such innovations like MOOCs, Kickstarter, Uber, Bitcoin, YouTube, and Blogger. “It’s no longer clear,” says Srinivasan, “that [government] can ban something it wants to ban anymore.” Without that coercive power and with value generation shifting online, the voices of the established powers are becoming less credible and the legitimacy of centralized government is increasingly being called into question.

The movement against the “Stop Online Piracy Act” or SOPA of 2012 is an interesting illustration. SOPA was solidly supported by American business leaders and key representatives of the US government. But rallied against it was a combination of rag tag, grass roots individuals and a who’s who of Internet companies including: Craigslist, Flickr, Google, Mozilla, Reddit, Tumblr, Twitter, Wikipedia, and Wordpress. On 18 January 2012, 115,000 websites went offline in protest of SOPA, most notably Wikipedia, in the largest protest action in human history, involving millions of people

²³ “How the Internet Is Taking Away America’s Religion”, *MIT Technology Review*, April 4, 2014. Accessed at: http://www.technologyreview.com/view/526111/how-the-internet-is-taking-away-americas-religion/?utm_campaign=newsletters&utm_source=newsletter-daily-all&utm_medium=email&utm_content=20140407

²⁴ Leonard, Andrew. “Silicon Valley dreams of secession”, *Salon*, Oct 28, 2013 accessed at: http://www.salon.com/2013/10/28/silicon_valley_dreams_of_secession/

worldwide, including over 10 million US voters. Said one protester, "The Internet has injected itself into the very fabric of society, [and] it feels like you're fighting the future if you're trying to regulate the Internet like this."²⁵ According to Yochai Benkler at Harvard University, "the blackout was a very strong public demonstration to suggest that what historically was seen as a technical system of rules that only influences [intellectual property regulation] of the content industry, has become something more," adding, "You've got millions of citizens who care enough to act. That's not trivial."²⁶ Overnight US Senators went from 80 for SOPA and 31 against to 65 for and 101 against. SOPA was essentially dead.

Srinivasan says the movement to virtual business or political worlds is in part a protest move, one that supports the voices of many who may see the need for change, but who in the existing government context can be effectively ignored by those in leadership positions who continue to profit from the status quo. "We want to show what a society run by [technology] would look like, without affecting anyone who still believes the 'paper belt' is actually good. That means building an opt-in society run by technology". In effect he's describing the creation of a "proof of concept" for an online society that operates separate but in parallel to the existing one. No one person is directing it but it is emerging on the basis of many individual efforts.

Laloux points out that, "never before in human history have we had people operating from so many different [organizational] paradigms all living alongside each other."²⁷ Each new organizational form doesn't totally replace an earlier one. Our original structures of government, for example, were designed when the notion of a meritocracy was just beginning to gain a foothold and *pluralistic* and *evolutionary* type organizations had not even been contemplated. Today, however, governments have become mash ups of many different forms of organization -- *ego-centric*, *conformist*, *meritocracies*, *pluralistic* and *evolutionary* – forms that are being employed with little actual attention to their alignment or limitations.

This co-existence of many organizational forms adds further to social complexity and to the challenge of governance. In their book *Tragedy in the Commons* Loat and MacMillan observed in a series of exit interviews with former Canadian politicians that while they were keenly aware that the political system wasn't working as well as expected, the researchers were surprised that the politicians had little in the way of suggestions or ideas for reforming it²⁸. However, immersed as these politicians were in the current top-down governance paradigm, this makes eminent sense.

To integrate them is not a simple management task. Their juxtaposition makes this difficult because of the inability of one state of animating consciousness to accept the realities of another. Knowledge is structured in consciousness and as our state of social

²⁵ "Internet's dark day: Anti-piracy bills take a beating". *Seattle Times*. 18 January 2012. Accessed at: http://seattletimes.com/html/nationworld/2017274222_sopa19.html

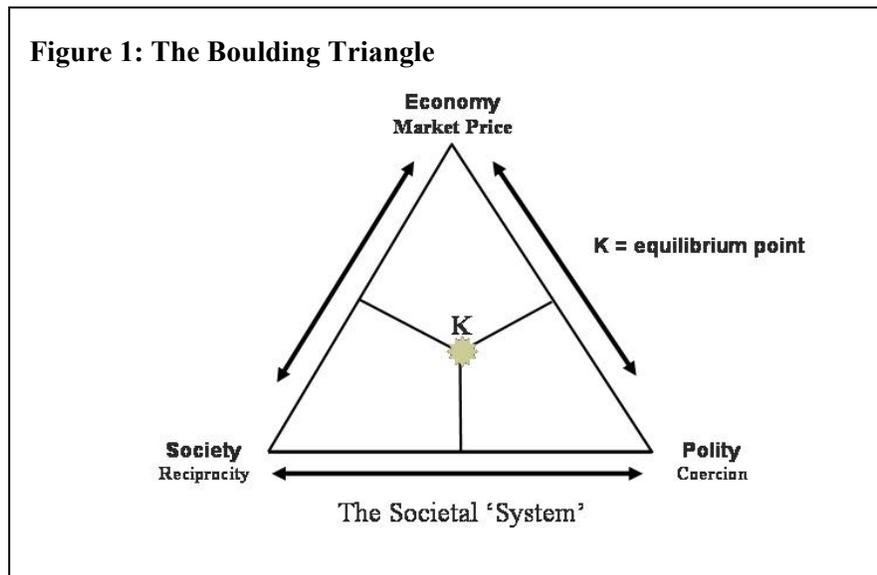
²⁶ *ibid.*

²⁷ LALOUX, Fredric. *Reinventing Organizations*, Nelson Parker, Brussels, 2014: 36

²⁸ LOAT, Allison and Michael MacMillan, *Tragedy in the Commons*, Random House, Toronto, 2014

consciousness changes, our perception of the ‘truth’ of reality changes with it. This is no less so when we consider the truth of organizations than when we compare the realities of waking and dream states. What may be obvious and straightforward in *conformist* organizations, may seem quaint or just plain wrong to *achievement* oriented or *evolutionary* organizations. So how do we accommodate different, evolving states of social consciousness and reconcile the different and sometimes incompatible forms of organization that they engender? The first step is to try and grasp the whole and see it as a dynamic system, the result of an interplay among competing perspectives.

Some years ago Kenneth Boulding²⁹ tried to depict our societal system as a set of dynamic tensions between the three spheres of human activity – our social or civic sector, dominated by cooperation and reciprocity; our economy, dominated by market exchanges; and our public sector, dominated by redistribution and coercive power. Another way of describing these relationships is to say that *Society* represents who we are; the *Economy* represents what we do; and the *Polity* represents how we coordinate both amongst all the groups and interests in society, but also between who we are and what we do. At any given time the equilibrium point between these three spheres, “K”, represents a snapshot of these complex socio-political-economic relationships. **Figure 1** depicts these relationships between the three spheres as those between the apexes of a triangle.



As events and social consciousness change, the equilibrium point, ‘K’, moves. During a natural disaster, for instance, as with the floods this summer in Saskatchewan and Manitoba, the ‘K’ will shift towards the Society apex as citizens are called upon to help their neighbours in the immediate aftermath. Then, as the resources of the government become organized, we see “K” moving towards the Polity apex as the social response shifts to emergency responders, public health officials, and even troops being sent in to

²⁹ BOULDING, Kenneth. *A Primer on Social Dynamics*, The Free Press, New York, NY. 1970

manage the rescue and evacuation. Finally, when the emergency is under control, the private sector becomes stronger, as it often dominates the recovery and rebuilding phase. the 'K' point will then shift towards the Economy apex. The 'K' point can be viewed as a sort of "armistice" among all the competing interests.

The Internet is altering all three of these apexes simultaneously:

- ◆ It is altering our sense of who we are -- both as individuals and as members of collectives. We are becoming more knowledgeable, more connected, with more shared values and shared experiences. We are fast becoming what could be called *homo globalis*.
- ◆ It is altering what we do and how we do it by increasing the rate of innovation. By helping to bring the transaction cost of coordination towards zero, the Internet permits individuals around the world to work together in creating new value while producing technologies that are contributing to a more collaborative economy.
- ◆ How we coordinate what we do with each other is being altered as coordination becomes increasingly embedded in an "*Internet of Things*" that broadly shares information on everything we do, distributing the means for coordination globally and providing mechanisms for reducing the potential for conflict. Public interest will become synonymous with maintaining an appropriate platform for individuals to connect, learn and coordinate with each other. Coercion as a tool for coordination will become less legitimate, except possibly when all else has failed -- but not as a principal mechanism.

The Internet and Our Evolving Social Consciousness

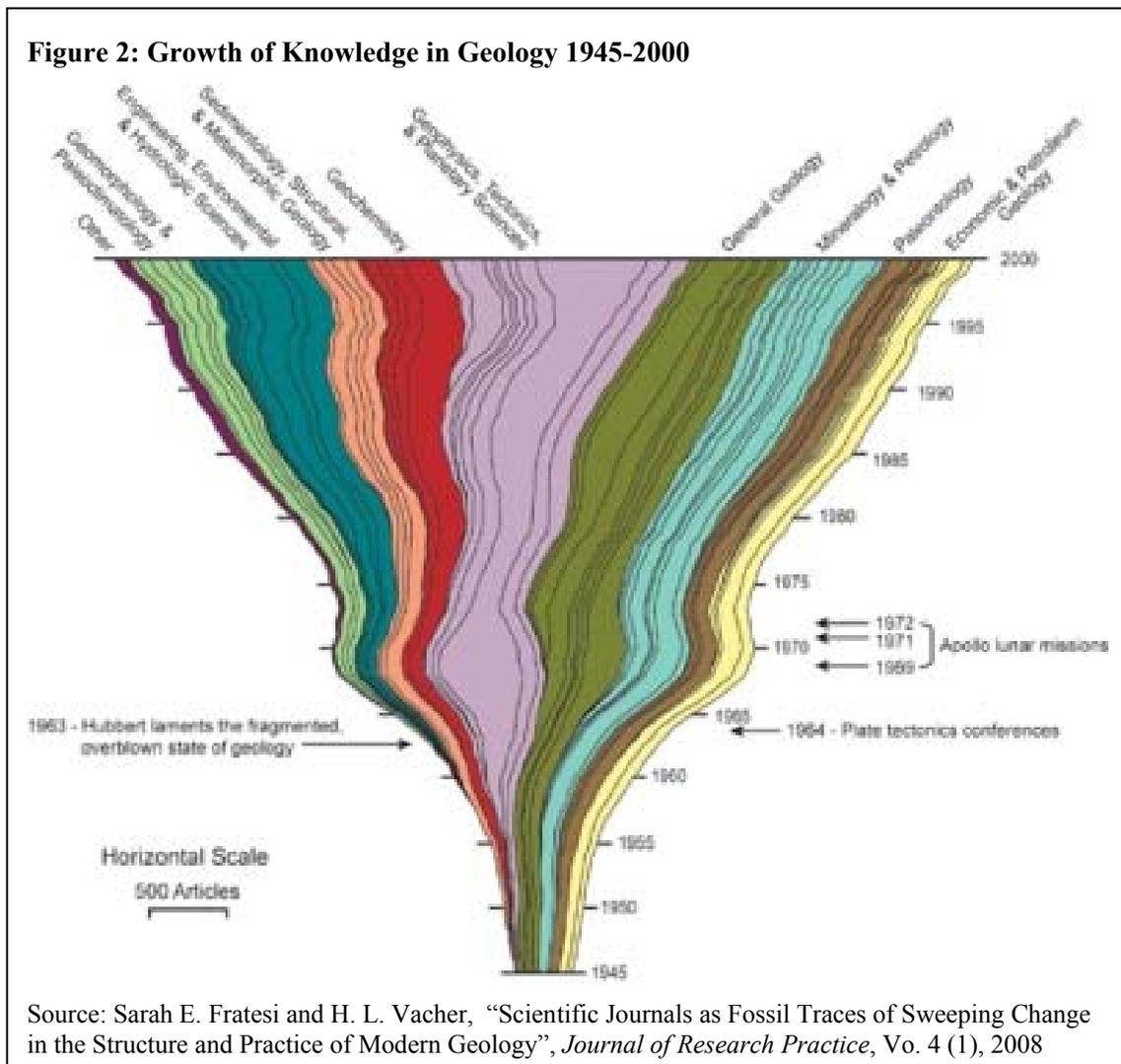
It is a truism to say that the Internet has connected more people with more information than at any time in human history. As of June 2012³⁰ there were 2.4 billion people worldwide who were Internet users (including 83% of Canadians). Of those, almost one billion people were using Facebook. Each day around the world over 144 billion emails and over 175 million tweets are sent on average. There are 624 million websites. YouTube users watch 4 billion hours per month of video and Google makes 1.2 trillion web searches annually. There is almost no part of the planet that now does not have Internet access of one kind or another – including such places as war ravaged South Sudan.

In addition, every day our roughly 1 trillion connected objects and devices on the planet generate about 2.5 quintillion bytes of data³¹ — an amount that is growing so fast that 90% of the data in the world today was created in just the last two years. This data comes from everywhere, including: sensors used to gather climate information, posts to social media sites, digital pictures and videos, purchase transaction records, and cell phone GPS signals to name but a few, but soon will include your fridge, stove, TV, thermostat and a host of other electronic devices. In the oncoming age of the '*Internet of Things*', pretty much all electronic devices will be contributing data of one kind or another that could be used to aid social coordination.

³⁰ Internet World Stats, accessed at: <http://www.Internetworldstats.com/stats.htm>

³¹ _____, What will we make of this moment? 2013 Annual Report, IBM, Armonk, New York, 2013:13

This burgeoning of data has had an explosive impact on the increase of knowledge. **Figure 2** illustrates the growth of knowledge during the post World War II period 1945-2000 in just one staid discipline, geology. Other disciplines have not only grown in a similar ways but this knowledge growth has given rise to entirely new disciplines such as the now commonplace disciplines of computer science, environmental science and systems science. Knowledge has become increasingly more specialized and fields of study increasingly more narrow. Prior to early 1980s, there were probably fewer than 50 fields of academic study, today however Wikipedia lists 1475 fields³² -- a 3000 % increase.



Further, the combination of universal education and the ubiquitous presence of Internet media have meant that all these new ideas are circulating quite broadly in the human population. The value of knowledge, like money, increases the more it is in circulation

³² *Fields of Knowledge*. Accessed at: http://www.thingsmadethinkable.com/item/fields_of_knowledge.php

and we do see the increases in innovation. But as Shirky cautions, “The more ideas in circulation, the more ideas any individual can disagree with.”³³ Remember in school, when we were all given tests and graded on the quality of our answers. The ‘right’ answer was a scarce and valued thing. Today, however, at the click of a button we can have access to an almost infinite array of answers. We have more answers than we know what to do with and more answers often means more argument.

As a result, the social challenge today is not finding answers, but asking the ‘right’ questions, something that technology is ill-suited for. Still, the connectivity provided by the Internet and other social technologies can help put people together to help them articulate important questions and then identify those questions that may have a broad basis of agreement. Given the ability of the Internet to give air to so many voices, perspectives, and ‘truths’, without an accompanying ability for dialogue and learning, there may be little chance of keeping a lid on the chaos arising from too many competing answers. From a public policy perspective this implies investing in systems of inquiry³⁴ -- systems that are open, inclusive, and ongoing -- rather than in systems designed for selling answers. Disagreement must become the accepted starting point of a conversation out of which a creative question can emerge in a broad social context.

There is a parable found in almost every major culture of the world about four blind men who encounter an elephant. One of them holds the elephant’s trunk and believes he is touching a snake. Another who is standing near the leg believes the elephant is like the base of a great sturdy tree. The third person leans against its side and believes the elephant to be a wall. A fourth feels its tail and believes it’s a pig. So who’s right, asks the parable? Because we see the whole picture we may laugh and say that they are all wrong, but from the perspective of each blind man, they all have good reason to feel they are right. All of their experiences are valid – just incomplete. But if they ever hope to understand the whole elephant, they have to find a way to ask another question -- what can be a snake, a tree a wall and a pig all at the same time? To get there they must learn to share their experiences with each other, to listen carefully, to trust that each other’s experience is valid and then be able to creatively generate a question that incorporates all of their diverse experiences. The parable illustrates the difficulty in understanding the whole with incomplete knowledge – a difficulty which people and governments world over constantly find themselves in.

More data, more answers, more voices, more contacts. Even as more data is creating an environment where answers abound, the capacity to socially construct quality questions will become increasingly precious – possibly even the basis of a new public good. Through the Internet people are connecting and having those online and offline conversations that are encouraging greater participation in community and social issues. And while it is true that many online conversations are inundated by people asserting

³³ Clay Shirky, “How the Internet Will One Day Transform Government”, TED Talks, 25 September 2012. Accessed at: <https://www.youtube.com/watch?v=CEN4XNth61o>

³⁴ PAQUET Gilles and Christopher Wilson. “Inquiring Systems” in *Stewardship: Collaborative Metagovernance and Inquiring Systems*, by R. Hubbard, G. Paquet and C. Wilson. Invenire Books, Ottawa: 2012.

answers or acting like trolls, more and more people are opting to work together to find their common story, develop their shared questions and solutions for a shared future. Our communities are becoming places where different people with different knowledge, resources and capacities are becoming bound together by their separate but complementary contributions to the common good.

We are in the midst of realizing what McLuhan envisioned back in the early days of radio as the “global village”³⁵, which he believed would be brought about by “electronic interdependence”. That is, when an electronic media would supplant the traditional text-based print culture as the medium for cultural exchange. McLuhan speculated that in this new age, humankind would evolve from individualism and many, small, fragmented tribal groupings into a collective identity, reflective of a global tribe. Despite some obvious many examples of ongoing fragmentation and conflict, we also seem to be on the verge today of ushering such a ‘global tribe’ into reality³⁶. We are in a period of transition when the glass is half empty but half full.

For instance, my wife is a piano teacher in our home in Ottawa, and she recently showed me this humorous YouTube video of an Indian piano teacher camping it up with that classical western staple of *Twinkle, Twinkle, Little Star* in seven different Indian dialects. That we could share this humour in a video designed for an audience that was clearly Indian, gives one pause to think of all the other things we may have in common with other people. It was a bit like the ancients once described as “seeing the self in others” although through an Internet mediated link. When we can see ourselves in others, there is less fear and a greater likelihood of treating others like family or friends. Some like Barbara Hubbard, liken the Internet to humanity’s neural net, linking together all the billions of individual human parts into a single collective organism. At some point, she predicts, it will wake up.

Heylighen agrees³⁷. “This evolution that injects ever more intelligence into the Internet leads to a near-term shift from World-Wide Web to Global Brain” where the “Global Brain” refers to the stigmergic mechanisms that support distributed intelligence online. Heylighen shows these are functionally identical to the mechanisms used by the human brain. He suggests the process of quantitative stigmergy, for instance, corresponding to human or software agents searching the web, is nearly identical to a process of strengthening neuronal connections that result in bursts of neuron activation that spread across the brain. Qualitative stigmergy, on the other hand, which can be seen as the basis of symbolic consciousness in the brain and is exemplified on the web by a variety of collaborative, “open access” sites where people freely improve on each other’s contributions.

³⁵ MCLUHAN, Eric. "The source of the term 'global village'". *McLuhan Studies*, Issue 2, 1996. Accessed at: http://projects.chass.utoronto.ca/mcluhan-studies/v1_iss2/1_2art2.htm.

³⁶ HUBBARD, Barbara. *Conscious Evolution: Awakening the Power of Our Social Potential*, New World Library, Novato, CA, 1998.

³⁷ HEYLIGHEN, Francis. *Accelerating Socio-Technological Evolution: from ephemeralization and stigmergy to the global brain*, ECCO, Vrije Universiteit Brussel, 2007. Accessed at: <http://pespmc1.vub.ac.be/Papers/AcceleratingEvolution.pdf>

Stigmergy is a form of communication that results from changes individuals make to their environment. Stigmergic collaboration has been described³⁸ as a form of mass cooperation and distributed action which is not dependent on the formation of relationships or social negotiation but results from independent contributions and reactions to them by collaborators who accept those contributions, modify or reject them. While stigmergic collaboration remains arm's length, it nevertheless has the capacity to continually build on what has come before. The ubiquitous connectivity of the Internet has made such mass collaboration ever more commonplace, as the 'open source' movement and Wikipedia can attest to.

With the emergence of a global community, its dynamics will likely move in ways similar to that of any community as it enlarges its collective welfare through increased specialization and diversity and more sophisticated forms of cooperation. We should expect to see extensive experimentation with a variety of mechanisms to mitigate the potential for social conflict while diversity inspired innovation adds to social welfare. The likelihood of creativity over conflict will be dependent on the social mechanisms created to foster information sharing, learning and collaboration on the one hand, and mechanisms to moderate conflict through trust building, moral contracting and the reduction of free-riding on the other. Thus the primary challenge of evolving governments will be to create new processes of social coordination that are consistent with Ashby's *Law of Requisite Variety*³⁹ and that meet or exceed the complexity reflected in a globally diverse yet increasingly interconnected world.

As the Internet fuels the collective capacity for stigmergic collaboration⁴⁰, growing numbers of people are responding to social problems self-sufficiently, as evidenced in the many 'open data' initiatives, 'Hackathons', and the citizen-driven applications that are being created for community benefit. We are becoming less and less dependent on government as the principal source and provider of public goods and services. This growing self-sufficiency is bound to alter the citizen relationship with government which to date has been paternalistic at best. And not surprisingly, as the legitimacy of government shrinks, the reputation of the civic sector has expanded in importance both as a respected place where adult conversations can take place, and as the delivery agent for public services.

MaAlpine and Temple⁴¹ note a confluence of factors that are pushing the civic sector into the forefront to social governance. They note the increased willingness of citizens to assume civic ownership demonstrated by this rising tide of civic engagement and volunteerism. They see the blurring of boundaries between sectors, as actors in each

³⁸ WILSON, Christopher. "On Collaboration", *Optimum Online*, vol. 41 (1) March 2011: ELLIOTT, Mark. "Stigmergic Collaboration: The Evolution of Group Work" *M/C Journal* vol. 9, Issue2, 2006

³⁹ ASHBY, W.R. "Requisite Variety and its implications for the control of complex systems", *Cybernetica (Namur)* vol. 1 (2), 1958.

⁴⁰ ELLIOTT, Mark. "Stigmergic Collaboration: The Evolution of Group Work" *M/C Journal* vol. 9, Issue2, 2006

⁴¹ MCALPINE, Jill, and James Temple. *Capacity building: Investing in not-for-profit effectiveness*. PricewaterhouseCoopers Canada Foundation, 2011. Accessed at: http://www.pwc.com/en_CA/ca/foundation/publications/capacity-building-2011-05-en.pdf

sector recognize their inability to implement change on their own. They observe how the many, largely small and distributed civic organizations are linking together in networks that enable new ways of working. Then out of that connectivity, they are detecting new ways of thinking and new models for achieving systemic change that are the products of large scale, long-term, multi-stakeholder initiatives. And they are noticing that the Internet and its accompanying technological advances are enabling both the production of networks and the new found scales of impact. The civic sector is increasingly becoming our social laboratory to experiment with new knowledge, new technologies and new approaches of cooperation.

At the same time, the responsiveness of governments, particularly to complex problems, is being slowed almost to the point of being non-responsive. In part this is due to the volume of knowledge and issue complexity governments must consider. But the declining public confidence in governments' ability to cooperate together with growing public demand for transparency and better accountability⁴² suggest a tension between what is being asked of governments and how they are structured. This tension is being generated because:

- ◆ the required knowledge is often in the hands of both citizens **and** government, resulting in less deference to government as the expert 'in-charge';
- ◆ citizens do not have the same operational overhead or the high transaction costs of government -- they are in effect more nimble;
- ◆ citizens are becoming more cognizant of their own ability to contribute, both individually and in concert with others, to the solutions that affect them; and
- ◆ there are, as a result of the above, growing demands by citizens to become principal actors in their own governance rather than just acquiescing to a role as entitled consumers of governance.

The public sector bureaucracies, which at one time were prized for their assurances of stability, are increasingly viewed as being 'out of touch' with their citizens or even as impediments to progress. The efficacy of the *Welfare State* model is increasingly under attack, even if a more appropriate alternative has yet to gain common currency. Its principal tenets of egalitarianism⁴³ and redistribution⁴⁴ are frequently observed to be neither fair nor effective. Except for the most devout of bureaucrats, few people still accept the *Hegelian* premise that the 'State' is somehow more rational and moral than its citizens, or that the 'State' knows best.

Our notions of '*representative democracy*' arose from the belief that given the logistical problems of bringing all citizens to one place to vote and act together, democratic governance could still be affected by delegating decision making to a few virtuous, knowledgeable experts (usually men) and bringing them together to work on behalf of

⁴² NANOS, Nik. "Canadians rate highly the issues close to their day-to-day lives", *Policy Options*, August 2012

⁴³ PAQUET, Gilles. "The Governance Of Equability", *Optimum Online*, Vol. 43, Issue 2, June 2013

⁴⁴ KRAYBILL, D. and KILKENNY, M., *Economic Rationales For and Against Placed-Based Policies*, paper presented to AAEA-RSS Annual Meeting, "Spatial Inequality: Continuity and Change in Territorial Stratification", Montreal, Canada, July 27-30, 2003\

everyone else. We set up systems of checks and balances to reduce the risk that these few could hijack the power of the public process for themselves. Public policy was presumed to proceed on the basis of objective evidence that was shared among experts and was thus expected to be free of vested interests.

In truth, this was hardly ever the case in any country – elected representatives were rarely expert; all too often for most people they were perceived as unethical; and, as Canada’s Charbonneau Commission has made painfully obvious, these vested interests, far from operating at a distance from modern governments, have had a perpetual and widespread influence in the public sector at every level, the extent of which is only now being exposed -- to the obvious detriment of the entire public sector.

Yet as the original quote from Farrell makes clear, “there’s good reason to think that democracy is better suited than either hierarchies or markets to solving certain kinds of complex problems.” That’s because democracy (although not the current representative version) can bring people with many diverse points of view together to pool their knowledge, their resources and their power to co-create solutions to address complex social problems. In effect, a democratic conversation can produce a greater understanding than the sum of its member contributions. If, that is, those conversations can be properly structured.

In contrast to *representative democracy*, the model of ‘*participatory democracy*’ implies that the knowledge and capacity to secure social coordination is broadly dispersed across the entire population, requiring greater participation of the citizenry and less reliance and dependence on expert elites. It is democracy by owners not by their agents. While still in its infancy in North America, *participatory democracy* has shown an upward trend in popularity because of the frequently perceived gap between local needs and the needs that are frequently identified by centralized governments. In fact the very egalitarian nature of modern governments prohibits them from providing customized solutions to local areas, thus encouraging more bottom-up, participatory approaches.

For instance, in Porto Alegre, Brazil’s tenth largest city, participatory budgeting or *orçamento participativo*, has operated since the late 1980s. This is a bottom-up process that emerges from neighbourhood levels to become citywide, one that permits citizens to set local, annual budget priorities to which elected officials can then allocate tax resources towards. In another example, Finland is using crowdsourcing to create new laws⁴⁵ and Iceland is attempting to draft a new constitution with public input via Twitter, Facebook and Flickr⁴⁶. The New Zealand government has experimented with a wiki in the most sacrosanct of all areas of government operation – policy development -- to permit citizens to participate in rewriting its Police Act.⁴⁷ And participate they did – much more so than the government anticipated.

⁴⁵ MEYER, David. “Finland is about to start using crowdsourcing to create new laws”, *GigaOM*, 20 Sept., 2012

⁴⁶ _____. “Iceland is crowdsourcing its new constitution”, *World e-gov Forum*, June 16th, 2011. Accessed at: <http://wegf.org/en/2011/06/iceland-is-crowdsourcing-its-new-constitution/>

⁴⁷ _____. “NZ police let public write laws”, *BBC News*, 26 September 2007

Canada's experimentation with *participatory democracy* has been limited to the use of citizen juries, first in BC and then in Ontario, in order to help find alternatives to its unrepresentative 'first-past-the-post' electoral system. That system frequently elects parties receiving less than 25% of the electorate's votes to majority governments. However, those reform efforts ultimately failed, primarily due to the lack of support from established political parties that had large stakes in maintaining the status quo. Still, the idea of participatory democracy has not entirely died. In observing the ongoing degeneration of Canada's Parliament, the *Globe and Mail* recently reflected that, "rather than fret over how to make the House more relevant and the Senate relevant at all, it may be better to explore how new technologies can put citizens, rather than politicians, in charge."⁴⁸

But how does one go about putting citizens in charge? Or to frame it another way, how does one scale up collaboration in environments where there are lots of people and issues of great complexity? Wouldn't having so many citizens 'in-charge' be a recipe for chaos -- or so the refrain goes? Not really. The success of putting citizens 'in-charge' hinges on the distinction between relationship-dependent, small group collaboration and stigmergic or mass collaboration. Stigmergic collaboration actually works better when more people are involved. The opposite is true for small groups. Mass collaboration involving millions can actually work quite well⁴⁹ precisely because it doesn't have to involve millions of relationships – only lots of people bringing their knowledge and attention to make things better.

Linus Torvalds, the originator of Linux and the open source software movement says, "I don't think complexity is the stopper — in fact I would (and do) seriously argue that especially in the face of complexity you absolutely have to have an open and collaborative development process, exactly because it's the only thing that scales. However, it's not enough to be open and collaborative — it needs to be distributed as well. And by 'distributed', I mean the massive parallel kind where everybody can replicate the whole thing."⁵⁰ From a *participatory democracy* perspective, that means citizens reasserting their direct ownership of the governance process. This in no way implies government by referenda. Instead, it suggests creating a platform upon which individuals can contribute and learn together.

The ease and frequency of creating many, new and diverse communities on the Internet (some of which may be global in reach) means that if we can identify a problem, then there are probably many others in the world who may be similarly challenged and with whom we can connect in order to envisage and implement solutions. Following this path may sidestep any need to persuade governments to do this or that on our behalf.

⁴⁸ IBBITSON, John. "We don't need politicians in charge. With technology, it's time to put citizens first", *The Globe and Mail*, 2 February 2013

⁴⁹ As the open source/ open access movement can attest to

⁵⁰ Quoted in, LOVE, Dylan. "A Conversation With Linus Torvalds, Who Built The World's Most Robust Operating System And Gave It Away For Free", *The Business Insider*, 7 June 2014, Accessed at: <http://www.businessinsider.com/linus-torvalds-qa-2014-6#ixzz34cksJobN>

What then happens when citizens can simply cooperate amongst themselves instead of petitioning government to do it for them? If people can self-organize using the Internet to produce collective goods and services in the same way, for instance, they can now book flights online instead of working through a travel agent, what becomes of a government whose role it was to be the main provider of those goods and services? Is this the new libertarianism, ie. no government is the best form of government?

Certainly there is growing evidence that when citizens can use Internet enabled tools, they do cooperate more. Bring your own solution, the new BYOS, is increasingly the hallmark of social coordination. Here are some interesting examples:

- **OpenParliament.ca** when the Canadian Parliament wouldn't provide parliamentary data to citizens in an accessible easy to read format, they did;
- **TheyWorkforYou.com**, a UK initiative trying to bridge the democratic disconnect through greater transparency and public engagement;
- **Loomio.org**, an open source web application for making group decisions that was originally created during the Occupy Wall Street period;
- **iCitizen Corp.** helps people to stay up to date on issues and legislation; rate and connect with elected officials; as well as participate in issue polls, the results of which are then sent to elected officials;
- **Citizen-attache.github.io** -- a citizen hackathon to generate insights and analysis for Canada's international aid community;
- **RandomHacksOfKindness** a network of events to build solutions that address challenges faced by non-profits, humanitarian and community organizations by making use of public data from all levels of government;
- **Laboratório Ráquer**, or "Hacker Lab", inside the Brazilian Chamber of Deputies that is open for access and use by any citizen so they can utilize public data in a collaborative fashion for actions that enhance citizenship.
- **DemocracyOS** - an open-source platform created in Argentina that is both web- and smartphone-based and can be used for voting and political debate that political parties and governments can download, install, and repurpose in a manner similar to WordPress blogging software.

Consequently, it seems reasonable to expect that if citizens continue to participate in this way, they will eventually demand a larger share of societal governance as real partners with government instead of being just passive recipients of government largesse? So what becomes of the roles of politicians and public servants?

A little reinvention would seem in order, if only to ensure the continued legitimacy of public sector. If self-sufficiency is indeed the trend, then would it not be wise to determine possible mechanisms to a) understand what citizens want; and b) help citizens get what they need. And if citizen participation is more the norm, then how could this behaviour be more formally and productively integrated into democratic institutions beyond the currently episodic participation in elections. Such moves would no doubt

involve a shift in mindset from the current paternalistic, “thou shalt do this” attitude to more cooperative attitudes like “how can we help?”⁵¹

Yet given the preponderance of **Stage 4** type organization in most governments, citizens will have to be clearer and louder in asserting their right to act as principals and owners of their own governance, before governments generally begin to embrace them as partners to any significant extent. Until then, one can expect the legitimacy gap between elected officials and citizens will continue to widen. Still the propensity of individuals to flock together and move in a common direction is being buttressed by their actions and conversations online.

For example Aaron Hurst says⁵² that in new companies, such as Etsy, Lenddo and Good Eggs, “we are seeing a pattern of change that ... points to the likelihood that we are in the early stages of a social evolution that is creating a new economy, one based on the creation of purpose for people... This is a shift from the era of Walmart and Amazon, which created tremendous profits for a few, but eroded opportunities for the many, including local communities, small businesses and artisans”. These online marketplaces are about purpose over profit and making purpose a driver of innovation and growth. Such a purpose-based economy would put the interests of people at its centre rather than the interests of corporations, shareholders, countries, tribes or aristocracy. As a result the power divide between individuals and organizations is being eroded.

The Internet happens to be the pre-eminent tool for linking individuals, purpose and society. Social media, such as Twitter, Facebook and YouTube, have become vehicles for individuals to shine and for communities to form. The experience of Canadian musician Dave Carroll is illustrative⁵³. In the spring of 2008, Carroll and his band, Sons of Maxwell, were traveling via United Airlines to Nebraska for a one-week tour. Prior to takeoff Carroll witnessed his \$3500 Taylor guitar was being roughly thrown around by United’s baggage handlers in Chicago, severely damaging it. Later United didn’t deny the experience took place but for nine months tried to deflect responsibility onto someone else, until finally they said they would do nothing to compensate Carroll for his loss. With no money for lawyers to fight United in court, Carroll did the only thing he could do – he wrote a song and then performed it, posting the video on YouTube.

The video, United Breaks Guitars, immediately went viral – garnering over a half a million hits within three days, drawing international media attention and seriously tarnishing United’s brand. Within 4 days of the video being posted, United’s stock price fell 10%, costing shareholders about \$180 million and triggering a call to Carroll from United’s Managing Director of Customer Solutions, Rob Bradford, who apologized for United’s treatment of Carroll and his guitar. Belatedly United provided \$3,000 in

⁵¹ Indications that such a shift in mindset is already occurring in some Canadian quarters such as in BC’s Public Health Services Agency, the Canadian Partnership Against Cancer and in Alberta’s evolving Wellness Strategy.

⁵² HURST, Aaron. “Etsy is proof that our economy is experiencing a biological event”, *The Guardian*, 6 June 2014

⁵³ <http://www.davecarrollmusic.com/music/ubg/>

compensation but the money was given to charity, as Carroll had already received two new guitars from Bob Taylor, the owner of Taylor Guitars.

In the past if customers were bullied by large organizations like United Airlines, then there really wasn't much they could do except maybe try and mount a lengthy and costly class action suit. Today the Internet gives them another alternative: a voice which can potentially resonate immediately with millions worldwide and create a compelling collective counter weight to the organizational power that was once almost unassailable.

To summarize, when applied to the world of today's digital natives (i.e. those who grew up with the Internet), the picture of 'who we are' looks remarkably different from those who first created our systems of governance and government or even from those digital immigrants of my own generation. The digital natives are more knowledgeable, more educated and have the greatest access to knowledge in human history plus they are witnessing a growth of knowledge that is occurring at an exponential rate. They are more connected both locally and globally. Not only are they more willing to collaborate and work with others, but they also see it as natural unlike previous generations who often consider collaboration "*as an unnatural act between non-consenting adults.*"⁵⁴ They are more confident in their own voice; more empowered; more participative and more willing to jump in to sincerely make a difference. As a consequence, they are less deferential to authority, less trustful of both leaders and government and less confident in government's ability to solve the problems that matter most to them. They see the world as home, humanity as their family and difference as something to be cherished, not feared. This represents a significant shift in social consciousness and correlates well with the emergence of **Stage 7**-type organizations observed by Laloux.

Lastly, whether it be in Silicon Valley's secession from the US 'paper belt' or in the prevalence of RandomHacksOfKindness, there appears to be among digital natives a desire to realize a grand purpose, one that can unfold both their own and humanity's potential. They believe that they can be more, that they do not have to accept the world as is, and that they can do more because they are not alone. They are connected to others near and far. There is a sense of global consciousness that is, on the one hand, being enabled by new technologies and the Internet, but at the same time is being reshaped by those same technologies and in so doing changing in very fundamental ways how we see ourselves, what we do and how we do it.

The Internet Is Changing What We Do And How We Do It.

"In the new world of business", says Thomas Malone, "lots of highly connected individuals will each make their own decisions using information from many other places. In fact, this revolution is now possible because new information technologies make it feasible—on a scale never before possible in human history—for vastly more people to have the information they need to make well-informed choices." As a result,

⁵⁴ Former US Surgeon General Jocelyn Elders, quoted in BACKER, Thomas. *Evaluating Community Collaborations*. New York: Springer Publishing, 2003: 10

“new technologies allow us to have the economic benefits of large organizations—like economies of scale and knowledge—without giving up the human benefits of small ones—like freedom, creativity, motivation, and flexibility... This revolution has already begun. We saw its harbingers in the final decades of the twentieth century in talk about empowering workers, outsourcing almost everything, creating networked or virtual corporations.”⁵⁵

Without a doubt, the ‘work’ of the last century and a half has been driven by corporations and the organizations created by them. Corporations arose out the notions of classical liberalism and laissez-faire economics but also from the need to make efficient use of an increasing number of new technologies. These technologies— whether they were steam engines, the electric motors, telephones, automobiles, computers or the Internet – were applied in mass production processes. The use of machines required people with standardized skills to feed them standardized inputs and other people willing to use their standardized outputs. Work was made routine and human input was essentially exorcized of anything unique, creative or unpredictable. A primary role of corporate management was to ensure that that unpredictability was eliminated from the practice of work.

With all the different activities, skills, processes and knowledge involved, mass production also required mass systems of coordination to oversee the development of new products, the production process, the selling of products and services, to oversee the oversight process and ensure investors were sufficiently rewarded. Corporations coordinated all these tasks through systems of hierarchy that pushed strategy, innovation, and decision making, together with rules for inter-group behaviour down from the top. Generally corporations structured themselves as **Stage 3-6** type organizations and it was always senior leadership that guided the organization and motivated change.

In today’s context, however, this top-down approach is proving to be neither smart nor effective. In companies with top-down management systems, the concentration of responsibility for innovation and organizational responsiveness among senior executives, with a litany of rules to ensure employee compliance can be seen as a learning disability and underutilization of talent. In such companies, employees rarely bring 100% of themselves to work and rarely do they feel sufficient ownership in what they are doing to go out of their way to be innovative. In fact, being innovative would mean going against orders from the top. Not surprisingly, several recent surveys by Gallup⁵⁶, for instance, have found that very few employees are engaged in their work, and even fewer are passionate about it.

“That's got to change”, says Gary Hamel⁵⁷, because Generation Z, the first digital native generation in history, is moving into the workforce and they are also "the most authority-phobic" generation in history. In their Internet culture, as we’ve already discussed, they

⁵⁵ MALONE, Thomas. “How Is the Internet Changing the Way We Work?”, *Open Mind*, 14 Mar 2014

⁵⁶ _____. *State of the Global Workplace: Employee Engagement Insights for Business Leaders Worldwide*, Gallup, Inc., Washington, DC. 2013

⁵⁷ Quoted in MEARIAN, Lucas “The next corporate revolution will be power to the peons”, *Computerworld*, 4 June 2013

connect, share, learn, teach and collaborate as a matter of course. It is not positional power which commands respect but the power to help others achieve their goals. For digital natives, coordination is not something that is imposed but something that emerges in a climate of openness, generosity and shared purpose.

Consequently, predicts Hamel “the next revolution in corporate America won't be technological, it'll be social...The real problem we're up against, is not technology, it's the management DNA in companies When you concentrate the responsibility for innovation at the top, you're holding your capacity to change hostage. It disempowers people ... Bureaucracy has to die.”

Sure enough, “the latest management trend to sweep Silicon Valley”, according to Greg Ferenstein⁵⁸, “requires CEOs to formally relinquish their authority and grant special protection for every employee to experiment with ideas. It's called *holacracy* and big name tech leaders have jumped on the bandwagon.” Holacracy is a governance system where authority and decision-making are distributed throughout self-organizing teams rather than being centralized at the top of the organization. “Twitter co-founder Evan Williams adopted it for his new blogging platform startup, Medium. The movement started making headlines when Zappos CEO, Tony Hsieh, announced that he will transition his entire Las Vegas company — with a billion dollars of revenue and 1,500 workers — to holacracy by the end of 2014.”

But even if bureaucracy is now being recognized by some as an impediment to progress don't expect it to go away quickly. Top-down leaders in the much more numerous **Stage 3-6** organizations abound, and both employees and society at large still strongly adhere to the notions of romanticized leadership – the white knight who swoops in and makes everything alright. It amounts to self-delusion, as economist Tim Harford observes, “I see the God complex around me, all the time ... I see it in our business leaders. I see it in the politicians we vote for — people who, in the face of an incredibly complicated world, are nevertheless absolutely convinced that they understand the way that the world works.”⁵⁹ And it is not just leaders. In the face of uncertainty, most employees too want to believe in white knights rather than face their responsibility for their situation. Says Block, “High control bosses are created by our reluctance to care for the whole and assume the risks inherent in our own freedom”⁶⁰.

Still, despite minimal formal change in Fortune 500 companies, perhaps the most vivid example of the growth of holacracy is the Internet itself. It is a product of a shared set of non-proprietary, technical protocols that permit different types of computers and software to communicate with each other. Anyone can create their own community and exchange ideas, interests, music, photos, videos, research and, as we have seen, much else. “The

⁵⁸ FERENSTEIN, Gregory. “Zappos just abolished bosses. Inside tech's latest management craze”, *Vox*, 11 July 2014. Accessed at: <http://www.vox.com/2014/7/11/5876235/silicon-valleys-latest-management-craze-holacracy-explained>

⁵⁹ HARFORD, Tim. *Trial, error and the God complex*, TED Global, July 2011. Accessed at: http://www.ted.com/talks/tim_harford.html?quote=1003

⁶⁰ Block, Peter. “As Goes the Follower; So Goes the Leader”, *AQP News for a Change*, July 1998

Internet has become the largest, most robust commons in history.” says David Boilier⁶¹. “The great virtue of [this] commons is that it can be a responsive, effective way to manage a resource in the public interest without command-and-control regulation and legalisms.”

The Internet commons flourishes because no one owns the Internet and so its users do not have to get permission from, or make payments to, any sort of intermediary. Anyone can do what they want, say what they want, build what they want on the Internet, and then manage their work however they wish. As Boilier points out, “the cable and telephone companies that provide access to the Internet are not allowed to favour large corporate users with superior service while leaving the rest of us—including upstart competitors and non-market players—with slower, poorer-quality service.” This notion that the Internet deals with everyone in the same way is a concept known as “net neutrality”.

Boilier continues saying, “Net neutrality is a key reason why the Internet has been so phenomenally generative. Because the Internet functions as a commons, it enables anyone to find others, strike up a collaboration and generate useful stuff without first having to pay a premium fee, raise capital or persuade a corporate gatekeeper that the idea is marketable.” As a result we see new types of value being created constantly, often disrupting well established industries, which so far include industries like: software development, publishing, travel, media and journalism, movies and investing to name a few. The combination of a global commons that nobody owns and ubiquitous sharing practices is fundamentally re-writing how we work together.

Back in 2001 in a talk to the Federal Reserve Bank of Kansas City, Larry Summers and economist Bradford DeLong suggested that as marginal costs approach zero, “the competitive paradigm cannot be fully appropriate”⁶² for organising commercial life, and they admitted that “we do not yet know what the right replacement paradigm will be”. According Jeremy Rifkin⁶³, “Now we know. A new economic paradigm – the collaborative commons – has leaped onto the world stage as a powerful challenger to the capitalist market”.

According to Rifkin, a growing number of producer-consumers, or *prosumers*, is not only producing and sharing easily digitized products such as information, software, news and entertainment, but they also contributing to the production of much more tangible products and services. Some of these include:

- transportation (eg. Zipcar and Vrtucar which provide access to cars without resorting to car ownership);
- car production (eg. Local Motors which permits end users to co-design and co-build cars);

⁶¹ BOILIER, Davd. “Elinor Ostrom And The Digital Commons”, *Forbes*, 10/13/2009. Accessed at: <http://www.forbes.com/2009/10/13/open-source-net-neutrality-elinor-ostrom-nobel-opinions-contributors-david-bollier.html>

⁶² DELONG, J. Bradford and Lawrence H. Summers, *The ‘New Economy’: Background, Questions, and Speculations*, August 2001. Conference draft accessed at: http://www.j-bradford-delong.net/Econ_Articles/Summers_New_Economy_2001.html

⁶³ RIFKIN, Jeremy. “Capitalism is making way for the age of free”, *The Guardian*, 31 March 2014

- renewable energy production (eg. feed-in tariffs which permit users to contribute to as well as draw from the electricity grid);
- 3-D printing which can copy products almost as easily as a document;
- accommodation (eg. Couchsurfing and Airbnb which turn that spare bedroom or couch into a hotel room);
- tools (eg. Washington, DC's Union Kitchen which hosts a 7,300 sq.ft. facility to share kitchenware); and
- online education (eg. MIT's OpenCourseWare or MOOCs which permit educators and students to contribute to educational resources).

The economic consequences of this sharing are twofold: a) prosumers tend to bypass both conventional markets and the need for ownership; and b) products and services can frequently be produced at near-zero marginal cost in the collaborative commons.

Plus, these efforts at co-creation and sharing have social consequences. Not only do they afford the opportunity to give expression to individual passions but also they provide opportunities to reach out and make a human connection at a time when modern, urban life has become increasingly insular. Couchsurfing.org, for example, provides not only travel accommodation for its 6 million members seeking and providing accommodation in 100,000 cities worldwide, but it also promotes a relationship that rewards both traveler and provider. For Couchsurfers, they are not just sharing their homes with strangers (an instinctively scary thought), but they are “sharing with friends they haven't met yet”. Says Molly Turner, the director of public policy for a similar short-term accommodation website Airbnb, “What's really going on here is the urbanization of the world and the re-urbanization of American cities. Either consciously or subconsciously, [people] are realizing that that involves the public realm, the commons, sharing goods and services and infrastructure.

Rifkin agrees. “Hundreds of millions of people are already transferring bits and pieces of their lives from capitalist markets to the emerging global collaborative commons, operating on a ubiquitous ‘Internet-of-things’ platform. The great economic paradigm shift has begun”⁶⁴.

Badger too concurs, saying “We're witnessing a paradigm shift toward sharing in the offline world because of the online technology that enables it... The Internet has essentially allowed us to expand the circle of people with whom we share. But even more fundamentally, the open-source culture of the web has taught us *how to share*, and made sharing a default of social interaction.”⁶⁵ In modern cultures that venerate independence, individualism, and self-sufficiency, the habits of *how to share* have been woefully underdeveloped. That the Internet is encouraging the development of these skills is significant.

⁶⁴ RIFKIN, Jeremy. “Capitalism is making way for the age of free”, *The Guardian*, 31 March 2014

⁶⁵ BADGER, Emily. “Share Everything: Why the Way We Consume Has Changed Forever”, *Atlantic CityLab*, 4 Mar 2013. Accessed at: <http://www.citylab.com/work/2013/03/share-everything-why-way-we-consume-has-changed-forever/4815/>

According to former World Bank Director and author Steve Denning⁶⁶, “the major changes that the Internet has already had on the economy include:

- ◆ It has shredded the vertical value chains of the 20th Century economy, in the process wreaking havoc on middle men, the markups and the margins;
- ◆ It has created a vast new set of horizontal value chains, in which millions of people are creating their own virtual meeting places and marketplaces with their own lateral economies of scale;
- ◆ It has created a generation of people who began *preferring* access to ownership, and so have stopped buying things; and
- ◆ It has shifted the balance of power in the marketplace from sellers to buyers. Customers have instant reliable information about the choices enabled by globalization and a capacity to communicate and interact with other customers. Suddenly the customer is in charge. Firms can no longer push average products at customers, in the confident belief that sales and marketing will be able to sell them. They now have to figure out what might delight customers and continuously deliver that.”

This is more than the mass customization talked about in the late 1990s. Companies must now engage potential buyers in ways that encourage their participation in defining need, co-designing products and services, the testing of prototypes and providing of feedback in addition to their product purchase. Marketing strategies are looking a lot more like the creation of movements around a group’s shared passions⁶⁷ and the distinction between buyers and sellers, producers and consumers is becoming much less clear.

Scott Adams makes the following observations: Firstly, that “technology is increasingly becoming a commodity. A smart start-up can build nearly anything.” Secondly, “the start-up culture is shockingly generous, every entrepreneur and investor seems genuinely interested in helping strangers succeed.” Lastly, “in an environment in which start-up resources are not limited, and no one can predict the next winner, and it is easy to measure customer behavior in great detail, the Internet is no longer a technology. The Internet is a psychology experiment.”⁶⁸ The ‘work’ is less and less about building things and increasingly about understanding how people react to things.

Translating this into a policy maker perspective, if the Internet is a psychology experiment, then policy makers should be looking to the Internet not as a channel to sell political ideas but as a platform to prototype and test ideas, learn from citizens, make improvements and then test the revised ideas with citizens yet again. Engaging citizens here should not be the sad fantasy prevalent in most public consultations where governments pretend to listen and citizens pretend they’ve been heard. On the contrary, they should be about authentic engagement that involves listening, learning and demonstrations that participation makes a difference because this is the work culture of an Internet based economy.

⁶⁶ DENNING, Steve. “Is The Creative Economy Also In Trouble?”, *Forbes*, May 09, 2014

⁶⁷ PHILLIPS, Robin, Greg Cordell, Geno Church and Spike Jones. *Brains on Fire: Igniting powerful, sustainable word of mouth movements*, John Wiley & Sons, Hoboken, NJ, 2010.

⁶⁸ ADAMS, Scott. “The Pivot”, *Dilbert*, 16 June 2014 Accessed at: http://dilbert.com/blog/entry/the_pivot/

As we have seen in evolutionary, **Type 7** organizations, making a difference together and having a shared purpose is a central element of coordination among self-organizing teams. “Companies that thrive in this new economic era will be the ones that work with their employees to understand what generates purpose for them and craft their jobs accordingly. It's a journey that begins with self-awareness. It is about engaging your employees around their relationships, and offering opportunities for creative expression and to make an impact on their local communities.”⁶⁹ Governments too will need to generate that sense of shared purpose in order to motivate and guide citizens into shaping and creating that future which they all want to live into. Overcoming the dependence on romanticized leaders and discovering that shared purpose will not, however, be a simple task.

Adams suggests the only way to get people *en masse* to understand an issue and participate is by testing one psychological hypothesis after another. Such tests might focus on:

- ◆ How does the citizen perceive this issue?
- ◆ What causes someone to share and to keep sharing?
- ◆ What makes an issue or solution go viral?
- ◆ What makes people want to take action themselves?
- ◆ What makes an issue sticky?
- ◆ How can they determine if they are making a difference?

Rather than centrally building a solution and then selling it on the population, the notion of the ‘Internet as a psychology experiment’ encourages an endless series of educated guesses matched with quantitative and qualitative feedback. Every policy maker in this context needs to become a behavioural psychologist with the relational and analytical tools to pull it off. In this environment of emergence, says Adams, perfection is less important than speed. “The most prized people are the ones who can work quickly and produce one buggy prototype after another.” It will be no surprise then the new maxim for success in Silicon Valley seems to be *Fail Fast: Fail Often*.

In contrast to traditional management beliefs, “my strategy has always been: Be wrong as fast as we can,” says Andrew Stanton, the director of such movies as *Finding Nemo* and *WALL-E*. “Which basically means, we’re gonna screw up, let’s just admit that. Let’s not be afraid of that. But let’s do it as fast as we can so we can get to the answer. You can’t get to adulthood before you go through puberty. I won’t get it right the first time, but I will get it wrong really soon, really quickly.”⁷⁰ It’s a modern take on Voltaire’s old turn of phrase, “the best is the enemy of the good.”

Knowing that you’re not going to get it right the first time out of the gate means that this *fail fast: fail often* approach necessitates a capacity to know: when you’ve failed as soon as possible; why you failed; how to generate alternatives; and how to quickly generate the

⁶⁹ HURST, Aaron. “Etsy is proof that our economy is experiencing a biological event”, *The Guardian*, 6 June 2014

⁷⁰ Quoted in BABINEAUX, Ryan and John Krumboltz. “Fail Fast, Fail Often: How Losing Can Help You Win”, *The Daily Beast*, 5 Jan.2014. Accessed at: <http://www.thedailybeast.com/articles/2014/01/05/fail-fast-fail-often-how-losing-can-help-you-win.html>

next iteration of a prototype. This is not a management system *per se* but an inquiring system⁷¹, a system that allows you to probe and question in order to be creative and responsive on the fly. And since the first thing required is knowing when you've failed as soon as possible, having access to a diversity of perspectives with different knowledge and experiences to contribute is a critical factor. Surrounding yourself with people with the same knowledge and experience as you, will almost certainly guarantee a degree of blindness and ensure that something that should have been discarded as a failure becomes institutionalized.

The implications of this *fail fast: fail often* approach on governance stems from refocusing work away from routine, mechanical tasks and top-down hierarchies towards an emphasis on self-organization, co-learning, collaboration and networks. From a governance perspective the impact of this is likely to include:

- ◆ Decreasing the legitimacy of public sector leadership and increasing the prominence of multi-stakeholder-style, network governance that favours stewardship over leadership;
- ◆ Increasing the frequency of self-organizing groups that operate at scales ranging from local to global and who are willing to resolve their own issues without the involvement of or even the desire for government participation;
- ◆ Creating a generation of people who are more willing to assume their ownership and make a difference by sharing with others and who are less inclined to be simple entitled, consumers of governance;
- ◆ Shifting the balance of power in the marketplace of coordination alternatives from the agency of leaders, representatives and parties towards the direct participation by citizens in the formation of policy, service delivery, monitoring and accountability in ways that are ongoing rather than episodic.

The Internet Is Changing How We Coordinate Ourselves

The growing misalignment between 'who we are' and how governments purportedly represent us is equally matched by the gap between 'what we do' and our expectations of how the public sector performs in its role. In a Boulding Triangle context, business and society are pulling on government to change. It's resistance to do so is resulting in a growing lack of public trust in governments that can be observed in every nation. In comparison to data from the 1970s that shows that high levels of trust in governments, at all levels, recent studies show trust in governments to be at all time lows. One recent survey of Canadians by the Institute for Research on Public Policy and Nanos Research⁷² found that a mere 9.4% of interviewees had confidence in the federal

⁷¹ PAQUET Gilles and Christopher Wilson. "Inquiring Systems" in *Stewardship: Collaborative Metagovernance and Inquiring Systems*, by R. Hubbard, G. Paquet and C. Wilson. Invenire Books, Ottawa: 2012.

⁷² NANOS, Nik. "Canadians rate highly the issues close to their day-to-day lives", *Policy Options*, August 2012,

government's ability to solve problems, while twice that many, 18%, had no confidence at all. As bad as that may seem, provincial governments ranked even lower.

Governments are leader driven but that leadership is increasingly perceived as being unethical or ineffective. According to Edelman's 2013 "Trust Barometer" survey, there is widespread scepticism about the ethics practised by political and business leaders. "The lowest scores were when those surveyed were asked if they trust leaders to "tell the truth, regardless of how complex or unpopular it is": only 18% trusted business leaders, whilst government leaders scored a yet more miserable 13%."⁷³ Why the low scores? "Edelman suggested that leaders have been slow to adapt to the requirements of a world in which top down is no longer the best way to lead, or in many cases even a viable one".

These days few people believe that governments have all the knowledge, resources and power they need to be effective; nor do they believe governments have the collaborative skills necessary to access those assets from others. Researcher Don Lenihan suggests⁷⁴, the really interesting lesson from recent polling is that "people have no trouble distinguishing between complex and transactional issues. This, in turn, suggests that when they say they have lost confidence in governments, they are really saying that they doubt whether governments are willing and able to develop the plans and build the partnerships needed to solve complex issues." As a consequence, citizens are less inclined to believe that governments can solve their problems even as they expect that governments could and should do be doing more for them.

Further, in some democratic countries like Canada, there is a growing fear that the democratic foundations of government are being systematically eroded⁷⁵. Referring to Canadian parliaments, for example, Andrew Coyne has warned we are close to a point of no return, "what we are left with, in short, is a largely ceremonial body — the form of parliamentary government, but not the substance. The problem grows worse with each passing year, and with each passing year it grows more difficult to reverse."⁷⁶

That same fear also seems to be shared broadly in the populace.. "It's now clear", says pollster Frank Graves⁷⁷, "that the trust deficit and the broader unravelling of social cohesion has reached a level where it is compromising the very legitimacy of our democracy and public institutions...We no longer seem to worry about nuclear annihilation or violence in the streets. A super-SARS pandemic isn't bothering us that much, nor is the idea of ubiquitous surveillance monitoring our every move. The thing which seemed to bother Canadians the most was the "acute decline of our democratic and public institutions".

⁷³ M.B. 2013. "Leaders without followers," *The Economist*, January 21. Accessed at: <http://www.economist.com/blogs/newsbook/2013/01/world-economic-forum-davos>.

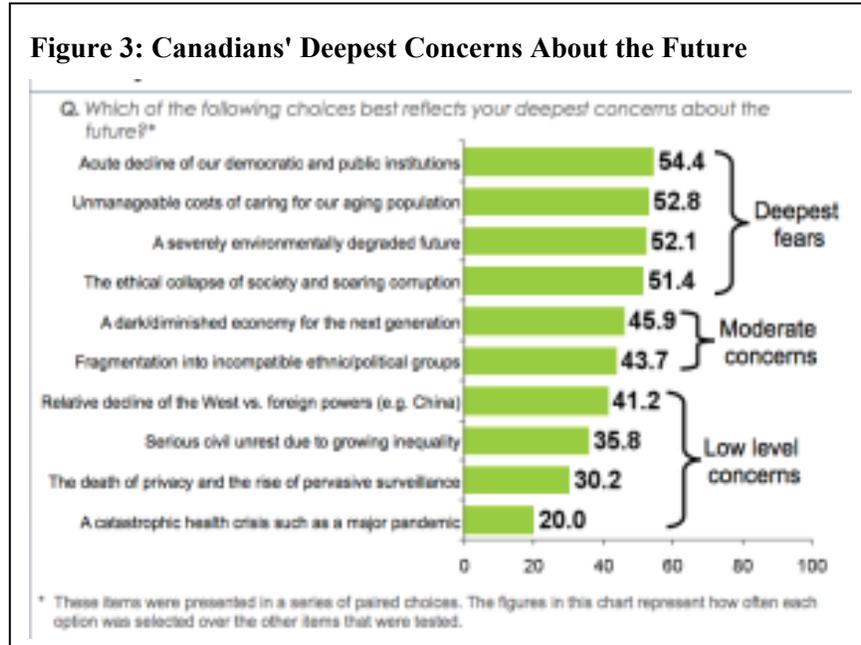
⁷⁴ LENIHAN, Don and Graham Fox, "Federalism upside down: Who speaks for Canada now?", *iPolitics*, 7 Aug 2012

⁷⁵ GRAVES, Frank. "The EKOS Poll: Democracy and the death of trust:", *iPolitics*, 2 January 2014 accessed at: <http://www.ipolitics.ca/2014/01/02/the-ekos-poll-democracy-and-the-death-of-trust/>

⁷⁶ COYNE, Andrew. "Parliament's at the point of no return", *Ottawa Citizen*, 19 October 2012

⁷⁷ GRAVES, Frank. "The EKOS Poll: Democracy and the death of trust:", *iPolitics*, 2 Jan 2014 accessed at: <http://www.ipolitics.ca/2014/01/02/the-ekos-poll-democracy-and-the-death-of-trust/>

Figure 3: Canadians' Deepest Concerns About the Future



Source: Graves, Frank. "Democracy and the death of trust: Ekos Poll", *iPolitics*, 2 Jan 2014
 Accessed at: <http://www.ipolitics.ca/2014/01/02/the-ekos-poll-democracy-and-the-death-of-trust/>

While there may be several factors for this lack of confidence, in part it is due to the growing misalignment with Internet-based culture. In particular, the Internet characteristics of openness, immediacy and collaboration simply do not resonate with the conformist, **Stage 5**-type organizations that make up most of government. For instance, when Canadians were asked recently on their views of how social media affected their quality of life in general and democratic health more particularly, over 60% felt that social media was positive and good for democracy. "Virtually everyone thinks that social media is a liberating force, enriching and broadening democratic and societal health," said pollster Frank Graves⁷⁸.

Yet despite this, the spontaneity and immediacy of communication implicit in 'Tweeting', for instance, tends to be entirely lost on government bureaucracies. The *Canadian Press* has revealed⁷⁹ that Tweets from Industry Canada were worked on by teams of bureaucrats for weeks in order to properly sanitize them. The Tweets were planned weeks in advance and then authorized via a 12-step protocol that included editing by dozens of public servants and then review and revision by the minister's staff – and all this from a department that's supposed to be on the cutting edge of new technologies.

It's a mal fit that the federal government had already identified through its research arm Policy Horizons Canada. "Social media has the potential to transform traditional

⁷⁸ GRAVES, Frank. "Social media: Democratic powerhouse or political placebo?", *iPolitics*, 3 Jan., 2013

⁷⁹ BEEBY, Dean. "Government tweets planned weeks in advance, edited by dozens", *The Canadian Press*, 2 February 2014

governance models. Open data, open policy development and crowd-sourcing initiatives all provide a means of enhancing citizen and stakeholder engagement.”⁸⁰ However, the report went on to say that realizing that potential is contingent upon changes to the public sector mindset to “strike a balance between open citizen engagement, direct decision-making and representative democracy, as well as weigh the need for transparency and mass collaboration with that of accountability and security.”

The use of social media resonates best with evolutionary types of organizations, instead of the rule-bound, conformist organizations typical of most governments. Suggesting that these organizations can suddenly be open and collaborative just by introducing a new technology is like suggesting that ice cream can be low fat and non sweet. While theoretically it is possible to create a low fat, non-sweet alternative to ice cream, but then it wouldn't be ice cream any more. While governments want to appear tech savvy and current to attract the next generation of public servants, and they use a lot of the right words -- like collaboration, openness, partnership, and transparency, yet the actual changes implied by these behaviours would mean transforming governments in ways they aren't yet willing to accept.

Hence we have the example of a young federal public servant in Canada who was publicly reprimanded for disclosing on his Facebook page that he participated in a political party. Public servants are permitted to belong to parties just not to disclose the fact for fear that someone or the media might claim their decisions were unfairly partisan. On the other hand, it is not uncommon for senior executives to make politically biased decisions but since they do not disclose the fact of their affiliation, one never knows whether that may be a factor and they can claim they are non-partisan. In the case of the former there is an opportunity to challenge the decision but not in the case of the latter. It would seem, therefore, that there is a systemic bias against the democratic principle of openness.

Government evolved over centuries as the pre-eminent mechanism for operating the means for social coordination in the delivery of public goods. In the past, the general imperviousness of government to quick changes was considered an asset, helping it to resist being hijacked by interests of the day. Change took place over decades not months or years. But, as de Long and Summers have suggested, “we can see that the governmental foundations underpinning the market system necessary to make it function well are not fixed in stone.”⁸¹ Today, because of the Internet, governments no longer have a monopoly on either the means of selecting, producing or delivering public goods and the public expectation of governments is that it should be at least as responsive as their experiences with businesses and not-for-profits. Because governments are often stuck in the pre-Internet era, they are increasingly out of sync with society at large.

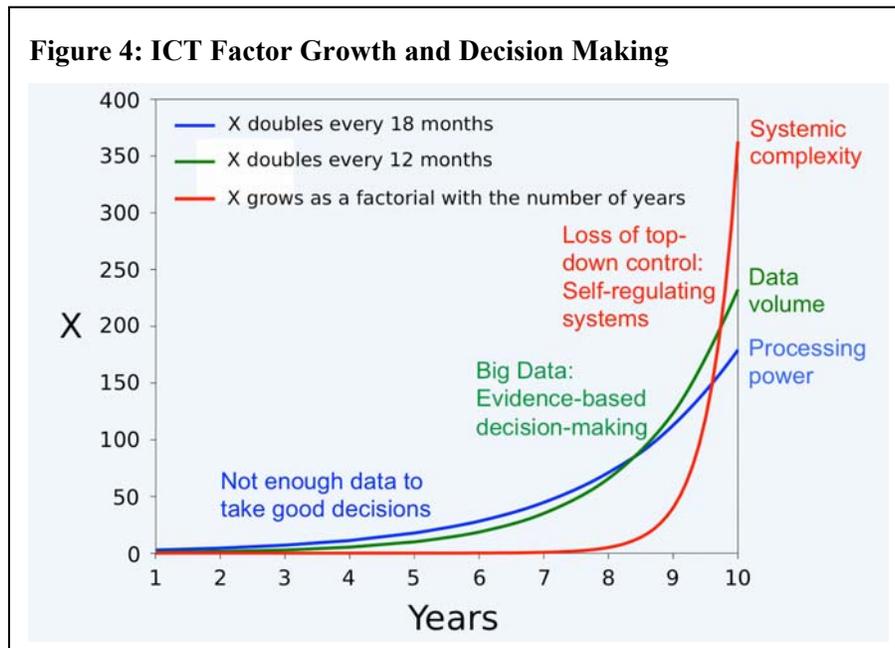
⁸⁰ _____. *Governing by Wiki: Social Media Foresight Summary*, Policy Horizons Canada, Ottawa, December 2011

⁸¹ J. Bradford DeLong and Lawrence H. Summers, The "New Economy": Background, Questions, and Speculations, August 2001. Conference draft accessed at: http://www.j-bradford-delong.net/Econ_Articles/Summers_New_Economy_2001.html

Citizens are thus often confronted with the choice to either wait for government or to go ahead on their own.

The oft expressed reactions to this are that governments just have to adopt technology faster or that newer technologies will eventually come along to help them out of their current difficulties and overcome the coordination failures, bad decisions, breakdowns of cooperation, unanticipated consequences and conflicts that have arisen wholly or partially because of previous technologies. It is simply naiveté to expect that new technologies, unaccompanied by new organizational mindsets or changed human behaviours, will close the confidence gap.

In fact, as Helbing reminds us⁸², the processing power of technology continues to double every 1.8 years (according to Metcalfe’s Law), yet the amount of data is doubling every 1.2 years and the complexity of networked systems is growing even faster (see Figure 3 below). Consequently, the centralized, technology mediated solutions for government are never going to be able to keep up. What’s needed are systems of self-organization, self-regulation, self-governance, collective learning and collaboration, in which citizens and stakeholders will participate and nudge issues forward, learning together as they go about identifying both their end goals and the means to get there. As Torvalds said, “in the face of complexity you *absolutely* have to have an open and collaborative development process.”



Therefore, key to reimagining the institutions of government must be reducing its reliance on hierarchy as its principal means of coordination. As Farrell points out, hierarchies and markets are ill suited for complex problem solving. Hierarchies are bad at representing different points of view. The views of the bosses, for instance, prevail over

⁸² HELBING, Dirk. *The World After Big Data: What The Digital Revolution Means For Us*, FuturICT, 20 May 2014, Accessed at: <http://futurict.blogspot.mx/2014/05/the-world-after-big-data-what-digital.html>

the views of the underlings, even if the underlings know more. Markets, on the other hand, are bad at bringing people into conversation with one another. The price mechanism is a marvel, as Hayek argued long ago, but it is a poor medium for the kind of interactive dialogue that can promote collective learning or persuade people to change their mind. Democracy creates equality — it alone allows different people to bring their various perspectives together and it thrives on the heterogeneous argument that can lead to better solutions. “Democracy is uniquely fitted to help people with highly diverse perspectives to come together to solve problems collectively.”⁸³

Yet almost all governmental organizations operate on a hierarchical basis. Attempts to challenge the status quo are almost invariably met with “then who would be in charge?” “You can’t have everyone in charge or there would be chaos.” “How would government be accountable?” Innovation in the public sector is stymied by the inability of people within government to think outside of their operating paradigm. Still change will take place, as Max Planck once described “not by convincing opponents and making them see the light, but rather because its opponents eventually die, and a new generation grows up that is familiar with it.”⁸⁴ This shift has started and it is gaining momentum.

There are a growing number of publicly available and often free alternatives to government. That is, people and organizations are finding new ways to cooperate amongst themselves without the interventions or coercive power of the State. From community-based collaborations, to the creation of geographically dispersed communities of practice via the Internet, to the creation of public applications and services by ordinary citizens, to a complete disintermediation of the role of government through the Internet connectivity -- social coordination is finding new avenues of expression.

In their book *Macrowikinomics*, Tapscott and Williams describe many examples of how the public space is being transformed by the growing acceptance of distributed networks of knowledge, resources and authority that are enabling the creation and delivery of public goods and services. In essence, the logic seems to be “if we can do it ourselves, then why do we need government?” This in turn puts pressure on governments to transform themselves or risk sinking further into irrelevance. “The price of inaction is a lost opportunity to redefine [the role of government] in society and help launch a new era of participatory government.”⁸⁵

In many small ways, citizens are beginning to assume activities and functions that have long been associated with governments. Here are some examples:

- ◆ *Economy* - eg. Digital currencies like **Bitcoin**, **Document Coin** and the new **Stellar** provide mechanisms for the exchange of value without resorting to national currencies and national banks. That also means that individual countries have little control over them.

⁸³ FARRELL, Henry. op cit. 2013:1

⁸⁴ PLANCK, Max. *Scientific Autobiography and Other Papers*, translated by F. Gaynor, Philosophical Library, New York, 1949: 33–34

⁸⁵ TAPSCOTT, Don & Anthony Williams. *Macrowikinomics*, Penguin, Toronto, 2010: 279

- ◆ *Garbage collection* – eg. **Let’s Do It Estonia** and **SeeClickFix** make community beautification a part of civic responsibility
- ◆ *Public transportation* – eg **Zipcar**, **FixMyStreet**, **Uber**, and a **Better Place** along with citizen created apps based on open data like “**Where’s my bus**” or **NextBus** provide ways of improving existing services or create alternatives
- ◆ *City planning* – eg. **The City 2.0** collects and disseminates stories and collective actions being taken by people around the world who are imagining cities that are more playful, more safe, more beautiful, and more healthy for everyone.
- ◆ *Education* – eg. **Solaris.ca**, the **Student Room**, **Kahn Academy**, **Gooru Learning**, **OpenCurriculum** and Massively Open Online Courses (**MOOCs**)
- ◆ *Public Health* -- eg. **PatientsLikeMe**; **We Are.US**; **MedHelp** or **SickWeather** provide knowledge and tools to help treat or prevent illness
- ◆ *Disaster relief* -- eg. **Ushahidi-Haiti**; and **Virtual Alabama** provide detailed data on conditions and disaster victims utilizing a host of concerned citizens
- ◆ *Space exploration* – eg. **Galaxy Zoo** and the **X-Prize** incentivizing humanity’s reach into space.
- ◆ *Oversight* -- eg. **Citizenbridge.org** & **LiveUAMap.com** and other citizen journalist sites using Twitter and YouTube providing real alternatives to government fed media lines that may lie or tell only partial truths.

The move to make information collected by governments available to the public, in so called *open data* initiatives, reflects an effort on the part of governments to try to co-opt citizens into reducing their costs of providing effective government services, but it is also transforming citizens from being passive consumers of government services into the public sector equivalent of *prosumers* -- participants and co-decision makers of their own governance.

The growing active participation of citizens in processes that address things that affect them directly or things that they are passionate about -- independent of their voting habits -- lends credence to the idea that today’s citizens are just as engaged in their democracy as previous generations -- and probably more so. It’s just that they tend to subscribe more to a “do-it-yourself”, or “in-your-face” forms of governance rather the old passive and paternalistic system of parties and elections.

Yet governments remain quite challenged to recognize democracy as a mechanism for facilitating the shared ownership of all their citizens. Instead democracy as practiced today is more of a modern version of a feudal arrangement towards an entitled aristocracy. Embracing co-governance implies articulating a new role for government. Already there have been calls for “local leaders [to] lead and senior governments [to] follow”⁸⁶ but the Internet revolution is less about leaders and more about distributing decision making to individual citizens.

⁸⁶ MAXWELL, Judith *Looking Down the Road: Leadership for Canada’s Changing Communities*, Community Foundations of Canada, 2006.

What happens if citizens do pick up the challenge and start having a significant impact on the production of public goods and services? What impact would that have on government? The most obvious answer is a lessening of the reliance on government to deliver these goods and services. Massive open, online courses, or MOOCs as they are popularly known, present an illustrative case of the growing self-sufficiency occurring in the public sphere.

Post secondary education has long required massive public investment into the ‘bricks and mortar’ infrastructures and the huge teaching and administrative staffs to enable large numbers of students to come together and receive instruction. For logistical reasons, class sizes were limited to less than a few hundred, largely because of the physical restrictions on classroom spaces and the need for manual assessment. Hence, there was a need to create many classrooms and many institutions as mechanisms to deliver on the modern promise of public education for all no matter where you were.

In my province of Ontario, for instance, the government spends approximately 24% of its total budget of \$127 billion⁸⁷ on education (\$23.2 billion on primary and secondary education and \$7.1 billion on postsecondary education and training) and this is not counting federal infrastructure transfers. By comparison, federal, state and local governments in the US spend approximately 15% of their collective budgets each on education⁸⁸. It is a colossal amount of money, with much of it spent on infrastructure. The significance of new online delivery mechanisms like MOOCS is that they can reach large numbers of students with very limited infrastructure and staffing requirements. Without these infrastructure and staffing requirements, the supporting function of government in education becomes minimal. Consequently, in the cash strapped environments of modern governments, we may soon begin to see some rather radical change.

MOOCs are conducted over the Internet without much need for centralized physical spaces. Course delivery is distributed to each computer and laptop among the up to 350,000 students that may participate in a single course and whose work is graded by computer algorithms rather than professors or student markers. Students are free to access these courses on their own schedule rather than on an institutional one. While accrediting such courses for degree purposes still remains an issue, the courses themselves already carry the imprimatur of some of the world’s most prestigious institutions, such as Stanford or Harvard, and involve some of the world’s foremost academics.

And all of this can be obtained at a tiny fraction of the institutional costs involved in traditional course delivery leading, leading to student costs that may be nominal or even free. Without the need for large physical spaces or institutional staffs, and a dramatically reduced need for student financial support -- if any – it looks as if the role of government in post secondary education may well be curtailed. In this context, many of the existing educational infrastructures could well become surplus, leaving a handful of only the very

⁸⁷ 2013 Ontario Budget

⁸⁸ CHANTRILL, Christopher. *US Government Spending*. Accessed on 9 September 2013 at: <http://www.usgovernmentspending.com/>

best universities and colleges to provide post secondary education to everyone on the planet.

In a similar manner, the government's role in public and secondary education may be reduced by what has been described by Sugata Mitra as *self organized learning environments*⁸⁹, where young children explore and learn from each other -- using resources and mentoring ubiquitously available over the Internet. Mitra's "Hole in the Wall" experiments have shown that, in the absence of any supervision or formal education, children can teach themselves and each other using of the Internet, and being motivated simply by innate curiosity and peer interest. The "Hole in the Wall" project demonstrates that, even without a teacher, students can learn new languages or complex ideas entirely on their own or with other children. What then becomes of the extensive networks of public and secondary schools and the large cadre of primary and secondary teachers?

Since the Internet is unlikely to disappear, can we re-imagine the roles of our schools and post-secondary institutions? One possible response might be to re-create them as vehicles for developing good learning habits and the skills to foster effective collaboration. Another is to use them as vehicles to develop the behaviours for living happy, healthy, fulfilled lives instead of just being vehicles for content delivery. That particular role seems to be finished. The Internet can tell them anything they need to know or could have previously picked up from kindergarten to grad school. For postsecondary schools in particular, communities will soon need to begin serious debates over how best to use the surplus infrastructures. And similar debates will likely need to take place with respect to issues of healthcare, transportation, economic development, and social services as the knowledge and means to receive these public services become more available.

In lieu of hierarchical government, what may be the characteristics of the 'platform' needed for large scale social coordination and the delivery of public goods and services? Author Don Tapscott says, "probably the most important thing ... government could do is transform itself around the Internet and the principles of collaboration."⁹⁰ Following the footsteps of open source, governments would need to identify ways to: encourage participation; become more open and inclusive to anyone; become more transparent in terms of how participant contributions generate results; and become more capable of engendering trust and reliability. They would also need to discourage anonymous individuals or organizations from causing harm to others, including the elimination of the current Internet practice of asymmetric privacy where some people are exposed and others can hide.

While these behaviours are not generally elements of a traditional public sector culture, they may already be observed in pockets across all governments having been introduced by public servants for whom collaboration and open exchange are just part of living. A

⁸⁹ MITRA, Sugata. *Build a School in the Cloud*, TED Talks, February 2013. Accessed at: http://www.ted.com/talks/sugata_mitra_build_a_school_in_the_cloud.html

⁹⁰ Quoted in TOSSELL, Ivor. "Don Tapscott: Let's crowdsource Canada", *The Globe and Mail*, 20 February 2013

stigmergic governance platform would empower everyone to connect with anyone; allow them to contribute data, stories, analysis, resources, and authority to any dialogue; and to benefit from the contributions of others in an ongoing process of learning together, creating new prototypes and evaluating progress. It would also enable crowdsourcing, crowdfunding, and various forms of social enterprises in order to generate social capital and crowd based wisdom.

Says Dominic Frisby⁹¹, “if everything can be dis-intermediated and decentralised, then what does that mean for healthcare, welfare and education, and the bureaucratic megalith of middlemen currently involved? What indeed will be the purpose of representative democracy when any issue can be quickly and efficiently decided by the people and voted on via the ‘block chain’⁹²? The revolution will not be televised. It will be cryptographically time stamped on the block chain.”

That said, how we coordinate ourselves is not the same as having a long list of policy positions for issues big and small. Obviously the ‘public’ online experience should not be dominated by trolls. Therefore governments have a role to play in determining how citizens can positively and productively engage with each other? If what we want is to build communities of practice that can apply their knowledge experience and resources to issues of public concern, then how can we create an environment for that to happen? What are the rules? “At the most operational and practical level, after all the thinking about policy, strategy, mission, and milestones, it gets down to this: **How are we going to be when we gather together?**”⁹³

Rules for an Internet-based Citizenry

One of the most controversial aspects of the **DemocracyOS** experiment planned for the Buenos Aires legislature is its lack of anonymity⁹⁴. Users of the official version of **DemocracyOS** must be of voting age, and must sign up using a national ID card and a second piece of identification (early plans to use Facebook as a means of authenticating users’ identities were dropped over concerns about making the platform overly reliant on a U.S. tech firm). And, in a significant departure from standard democratic practice, how a person votes on the platform is not secret.

“We had a 20-hour debate on the anonymity issue,” said Pia Mancini the leader of Argentina’s Net Party. “We wanted to promote a healthy debate. When people hide behind an avatar, they tend to be much less responsible about what they say. We didn’t

⁹¹ FRISBY, Dominic. “How Bitcoin tech will revolutionise everything from email to governments”, *Virgin Entrepreneur*, 24 June 2014. Accessed at: <https://www.virgin.com/entrepreneur/how-bitcoin-tech-will-revolutionise-everything-from-email-to-governments#.U6k5KCQxxic.twitter>

⁹² The ‘block chain’ refers to a open source, transactional database found in cryptocurrencies such as Bitcoin that is sequentially and continuous updated to reflect exchanges in value.

⁹³ BLOCK, Peter. *Community: The Structure of Belonging*, Berrett-Koehler, San Francisco, 2008: 10

⁹⁴ Scaturro, Michael. “Designing an Operating System for Democracy”, *The Atlantic*, 19 Jul 2014. Accessed at: <http://www.theatlantic.com/international/archive/2014/07/designing-an-operating-system-for-democracy/374526/>

want to have a platform full of trolls. We didn't want a Facebook- or Twitter-style debate. The only way we have to make it clear that we aren't tampering with the system is to make everything transparent and public.”

Such simple rules are common place with open, stigmergic collaborations. They act as guard rails to keep everyone on track. Too few rules and online discussions degenerate into uncivil shouting matches or are open to manipulation. Too many rules and potential contributors are discouraged from participating, as Wikipedia discovered in 2009⁹⁵. Wikipedia grew because of its minimalist attitude towards rules. Nonetheless when they imposed an increasing number of rules in 2009, many new contributors were put off because they regarded them as irritating and useless. From this experience it would seem that if you're trying to maximize the number of possible contributors to any online collaboration, it's a good idea to minimize the number of entry barriers. Participation should be seen by potential users as essentially barrier free.

The following represent a further list of potential practices that can encourage citizen participation⁹⁶.

Prototyping

The flip side of the *fail fast: fail often* maxim is the *open source* maxim of “release early and release often”. It is presented as a strategy to encourage stakeholders to become co-developers of ideas and tools with the originator. Rather than waiting to release an idea to the public until it is perfected, as is the practice in many organizations, the open source, stigmergic approach to collaboration tries to release drafts as early as possible with a clear understanding that they are incomplete, inaccurate and ‘buggy’. Stakeholders are then encouraged to respond with improvements and fixes. Still even if you don't come up with a good idea, you have to be able to know a good one when you see it in order to properly recognize the contributors within a community of practice.

Self-organization & Ownership Practices

It's very hard to originate an online project in mass collaboration mode. Therefore to engage a nascent community requires having some form of ‘straw dog’ for them to begin playing with. Torvald mentions that it was his original Linux kernel that got people interested and excited. A ‘straw dog’ must be sufficiently developed to represent a *plausible promise* of something better because even if the path forward may not at times be clear, the group should never lose sight of the possibility that their work might one day engender.

Awareness Practices

Build in as many ways as possible to listen to your stakeholders. Ask them about what works and what doesn't and thank them for their contributions. Listening to stakeholders

⁹⁵ Whitney, Lance. “Wikipedia losing volunteers”, *CNet*, 28 November 2009

⁹⁶ WILSON, Christopher. "On Collaboration", *Optimum Online*, Vol. 41, Issue 1, March, 2011

doesn't necessarily mean relinquishing total control to them. If, however, you do not accept their contributions, then be prepared to offer a good explanation as to why.

Generosity Practices

The next best thing to having a good idea yourself is publicly recognizing the good ideas of others. In fact, most *open source* advocates⁹⁷ would say that the latter is in fact better.

Coordination Practices

Find as many ways as possible to move information around to foster mutual alignment and coordination. Facebook and Twitter are especially good at providing almost immediate feedback, but more thoughtful feedback may require the more delayed contributions of wikis or face-to-face meetings.

Exchange Practices for Codifiable Knowledge

Collaboration is all about exchange and that exchange can be either around subject matter information or information that supports further partner collaboration. Successful online collaboration ensures that there are repositories of both types of information.

Conclusion

The issue for governments today is not the challenge of social coordination itself nor the specific issues that they require coordination on. Rather it's that existing governmental institutions force social coordination through what are now considered to be slow and ineffective systems that are seeding a perception of illegitimacy even as citizens continue to learn alternative ways to cooperate independent of government. Without that social licence of legitimacy, governments will lose the willing compliance of their citizens. The consequence of this loss of willing compliance can be significant. It will become harder for governments to collect taxes; laws will become more difficult to enforce; and obtaining social compliance will become more difficult except through more coercive and costly measures⁹⁸.

Yet seen through the perspective of **Stage 4-6** type organizations, governments are losing control -- there is simply too much knowledge in the hands of too many people; and too many people who can connect and cooperate on their own without the permission or intervention of government. Most governments exhibit a kind of policy blindness that prevents them from seeing that they can learn to live quite successfully with a lack of control, uncertainty, unpredictability, non-linearity, complexity within a constant state of evolution. For most governments, the knee jerk reaction is trying to follow the rules more

⁹⁷ RAYMOND, op. cit. 1998

⁹⁸ In his book on Social Traps, Bo Rothstein provides an interesting comparison between the high tax compliance of Swedes and low compliance of Russians to illustrate the importance of citizens willingly complying with laws. Rothstein, Bo. *Social Traps and the Problem of Trust*, Cambridge University Press, Cambridge, UK 2005.

strictly or adhering to traditions more thoroughly. But in the emerging Internet culture, none of this will be enough to reestablish control. While there are also attempts to reassert control by other, older **Stage 3** type measures, however, these kinds of measures shouldn't be the desired solutions for any government that aspires to be democratic.

In a recent TED talk⁹⁹, Clay Shirky describes the experience of Martha Payne, a nine year old Scot who lives in the Town of Argyle who published a daily food blog called *Never Seconds* to document the food being served in her school cafeteria. Within a short period of time, thousands of people tuned in to watch her rate her school's lunches. Then, all of a sudden she published a goodbye notice saying that she had to shut down her blog after her teacher told her that she was no longer allowed to take pictures in the lunch room any more.

What might have been considered by school administrators as an innocent means of student engagement, a lesson in civics, or as a means of increasing public accountability to parents and students, was interpreted as a threat. So Martha was shut down. Not surprisingly, the public backlash was large and unanimous – “how dare they censor a nine year old girl!” Within hours the school board reversed itself claiming censorship was never their intent -- except that that is exactly what it was.

As Shirky reflects, “How did they think they could get away with such flagrant censorship?” And then he answers, “*Because they always did.*” In the past there was no way for a nine year old to speak to such a large audience, let alone become a hub of a community. In the past school board actions could be taken without anyone knowing except the people involved. There was no collective power to challenge them. Martha's story is therefore illustrative of the changing relationship between citizens and their governments. It illustrates the growing tendency of citizens -- for fun or profit -- to become engaged in areas that have until now been viewed as the exclusive purview of government. And it also shows how transparency and connectivity have hobbled governments from acting in imperious and coercive ways just because they always have.

Governments today are less and less able to control either the flow of information, or the way in which citizens may choose to engage with them -- that is, if they do not want to put at risk their stock of public legitimacy. Yet as start-ups like **DemocracyOS**, or **Loomio.org** or some form of ‘block chain’ governance system begin to mature, traditional governmental institutions will be looked upon by digital natives like we may now look upon feudal systems of the past. Currently governments are “locked in a political paradigm that was designed for a very different world”, says Lenihan, “one defined by winner-take-all debates, simplistic policy solutions, a passive public, and ideologically-driven decision-making.”¹⁰⁰ Governments must either they adapt or they risk spiralling into irrelevance.

⁹⁹ SHIRKY, Clay. *How the Internet will (one day) transform government*, accessed at:

http://www.ted.com/talks/clay_shirky_how_the_Internet_will_one_day_transform_government.html

¹⁰⁰ LENIHAN, Don. “Volatile voters, wicked issues — and a whole new era in politics”, *iPolitics*, 2 April 2013. Accessed at: <http://www.ipolitics.ca/2013/04/02/volatile-voters-wicked-issues-and-a-whole-new-era-in-politics/>

My view is that they will adapt. And I suspect that the governments of tomorrow, although they may resemble on the surface the institutions of today, will be functionally nothing like today's governments. If people and organizations are willing to cooperate then the 'public' role will principally involve facilitating that cooperation. People will need someone to act as a trusted broker to help connect them with others around issues, both on and offline. Citizens will need mechanisms to help them trust each other. Sometimes they will require conflict resolution. Almost invariably someone will be needed with the appropriate skills and knowledge about the practice of collaboration. And the parties will need to know if what they're doing together is having the desired impact. From this perspective it would seem that as government evolves it will, in many ways, begin to resemble the Internet itself -- connected, networked, open, inclusive, permissionless, facilitative, collaborative, trusted, learning, innovative and adaptive.

Right now we tend to think of government as a kind of 'all-powerful OZ' -- the controller, the protector, funder of public goods and services, the great equalizer, the redistributer, the omniscient one. In the future, as the consciousness of citizens and organizations shifts to the paradigm reflected in evolutionary **Stage 7**-type organizations, they will pull back the screen to seek the very human ways in which governments can act in support of them via some platform upon which they can directly affect cooperation with each other.

Right now what seems to be holding us back is neither technology nor law but a series of collective mental prisons: "the State knows best and always acts in the public interest"; "Government can fix it"; "Someone must be in charge"; the State can do anything"; "Citizens are to be managed"; "I have rights (but no obligations)"; "Democracy is about voting for representatives"; "That's not how we do it around here". Collectively as a society we are all being held hostage by such ideas. "What is required is a revolution of the mind", say Higham and Paquet.¹⁰¹

If such a shift in consciousness can take place, then the changed conversations that will inevitably ensue are likely to alter fundamentally our notions of how governments relate to citizens, businesses and even to each other. We can expect less of the domineering, big 'G' Government and more of the small 'g' style of governance that is facilitative of the work of others.

The Internet is a model of such small 'g' governance as it encourages behaviours that foster cultures of sharing¹⁰², elements of which might include:

- enabling greater openness¹⁰³; knowledge dissemination and exchange;
- promoting shared ownership and
- identifying new resources and promoting shared commitment;
- embracing networks over top-down control;

¹⁰¹ HIGHAM, Robin and Gilles Paquet. "Reflections on the Canadian Malaise", *Optimum Online*, Vol. 43, Issue 2, Jun 2013

¹⁰² WILSON, Christopher. "On Collaboration", *Optimum Online*, Vol. 41, Issue 1, March, 2011

¹⁰³ For example, Obama's first act as President in 2009 was to sign into law the Open Data Initiative.

- decision making;
- enabling active listening through stigmergic communication;
- nurturing stewardship;
- encouraging moral contracting;
- fostering boundary spanning & network brokering;
- facilitating social learning and innovation;
- adopting cooperative attitudes like “how can we help?” over “thou shalt do this”;
- enabling angel-style investing;
- reducing conflict in communities of practice;
- providing opportunities for rigorous feedback & accountability; and
- enabling effective collaboration

Nevertheless, “the small-g governance approach raises some fundamental questions that are never confronted head-on by the Big G government approach,” according Paquet¹⁰⁴, “because they are wrongly presumed to be already resolved”. These include the questions of a) how to ensure effective coordination among stakeholders who share significant portions of the power, resources and information required to steer or implement an initiative; b) how to arrive at shared principles, norms of behaviour and mechanisms of engagement that ensure sufficient trust and effective stewardship; and c) that the frameworks, skills and mechanisms of collaboration are widely known and understood. As a result, the current round of exhortations from governments for public servants to cooperate amongst themselves and with the public are essentially empty gestures that fall on deaf ears.

It would seem therefore that in the end the options for government all involve embracing some form of transformation. Governments and citizens can jointly re-imagine how they want to be together and how they can best work together as partners in governance to create a future that everyone wants; Citizens can move forward with social coordination being provided by the growing ‘Internet of Things’, while seceding for all intents and purposes from the world of government altogether; or government will stage a coup to try and reassert its control over a population that is neither ignorant, incapable, homogeneous, isolated or deferent. In any event, we are talking of total transformation or revolution not simply incremental reform.

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¹⁰⁴ PAQUET, Gilles “Governance As A Mythbuster”, *Optimum Online*, Vol. 43, Issue 1, Mar 2013